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## NASD Regulation of IPO Conflicts of Interest - Does Gatekeeping Work?

Royce de R. Barondes

*University of Missouri School of Law*, [articles@legal-environment.com](mailto:articles@legal-environment.com)

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# NASD Regulation of IPO Conflicts of Interest— Does Gatekeeping Work?

Royce de R. Barondes\*

*Numerous scholarly analyses of capital markets regulation conceptualize assorted professionals, e.g., lawyers, accountants, and investment banks, as “gatekeepers.” Although some gatekeeping is explicit, e.g., the audit requirement for public companies, other gatekeeping is implicit. Lawyers and investment banks act as gatekeepers in deciding whether to link their professional reputations to prospective clients.*

*Much legal scholarship investigating gatekeeping is qualitative, presenting merely indeterminate analyses. This Article informs the debate by presenting empirical evidence of the efficacy of one kind of gatekeeper, a “qualified independent underwriter.”*

*National Association of Securities Dealers, Inc. (NASD) rules provide that when an investment bank participating in a securities offering has one of several enumerated conflicts of interest, the securities cannot be sold at a price higher than that recommended by a qualified independent underwriter. Examining prices of 1188 initial public offerings (IPOs) from 1997 through 2000, regression results disclose IPO purchasers have relatively worse initial returns, estimated at fifteen percentage points lower, where participating investment banks are receiving more than 10% of the IPO proceeds. There also is a relatively worse initial return, estimated at twenty-seven percentage points lower, where participating investment banks own at least 10% of the issuer’s preferred stock or subordinated debt. Qualitatively similar results are obtained by estimating the “average effect of the treatment on the treated” through propensity score matching.*

*The results indicate proposals to subject all IPO pricing to approval by independent broker-dealers—on which the NASD solicited comments—would likely be ineffectual. The results also provide guidance in assessing the extent to which reputational capital provides adequate incentives for investment banks to act as gatekeepers.*

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\* Senior Fellow, Contracting and Organizations Research Institute; Associate Professor, University of Missouri-Columbia School of Law. The author would like to thank John Howe; Cynthia McDonald; Gary Sanger; Mike Sykuta; and, for comments on preliminary results, participants at the 2002 Annual Huber Hurst Research Seminar. Generous financial support was provided by the L.G. “Greg” Copeland Faculty Research Fellowship, the Glenn A. McCleary Memorial Faculty Research Fellowship, and the Donald P. Thomasson Faculty Research Fellowship.

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## I. INTRODUCTION

Recent corporate scandals<sup>1</sup> have yielded a substantial amount of scholarly literature on regulatory mechanisms to restrain opportunism in the capital markets.<sup>2</sup> The current regulatory framework in large measure relies on mandatory disclosure.<sup>3</sup> An additional component of the framework that is perceived to reduce malfeasance is the participation of gatekeepers: professionals whose roles include restricting access to the capital markets by certain issuers.

Some of this gatekeeping is expressly mandated by federal law. Examples include certain requirements to provide audited financial statements in annual reports<sup>4</sup> and registration statements.<sup>5</sup> Other

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1. Recent corporate scandals are so numerous, the *Wall Street Journal* has prepared a scorecard. Robert Frank et al., *Scandal Scorecard: Executives on Trial*, WALL ST. J., Oct. 3, 2003, at B1.

2. See, e.g., Mitu Gulati et al., *Fraud by Hindsight*, 98 NW. U. L. REV. 773, 775 n.8 (2004); Symposium, *Crisis in Confidence: Corporate Governance and Professional Ethics Post-Enron Sponsored by Wiggin & Dana*, 35 CONN. L. REV. 915 (2003); Symposium, *Enron and Its Aftermath*, 76 ST. JOHN'S L. REV. 671 (2002); Symposium, *Enron and the Future of U.S. Corporate Law and Policy*, 89 CORNELL L. REV. 269 (2004); Symposium, *Enron: Lessons and Implications*, 8 STANFORD J. L. BUS. & FIN. 1 (2002); *F. Hodge O'Neal Corporate and Securities Law Symposium: After the Sarbanes-Oxley Act: The Future of the Mandatory Disclosure System*, 81 WASH. U. L.Q. 229 (2003); *Lessons from Enron: A Symposium on Corporate Governance*, 54 MERCER L. REV. 663 (2003); *Lessons from Enron, How Did Corporate and Securities Law Fail?*, 48 VILL. L. REV. 989 (2003); Symposium, *On Enron, Worldcom, and Their Aftermath*, 27 VT. L. REV. 817 (2003).

3. See, e.g., 15 U.S.C. §§ 77e, 77j (2000) (requiring the filing of a prospectus and registration statement for newly issued securities).

4. E.g., Form 10-K, Item 8, 5 Fed. Sec. L. Rep. (CCH) ¶ 31,104, at 22,067 (Oct. 20, 2004) (requiring provision of financial statements meeting the requirements of Regulation S-X, 17 C.F.R. pt. 210 (2004)).

gatekeeping is not express but implicit. For example, Gilson and Kraakman, in their famous work, *The Mechanisms of Market Efficiency*, indicate investment banks implicitly “rent” their reputations when they underwrite securities,<sup>6</sup> which thereby implicitly makes underwriters gatekeepers.<sup>7</sup>

These gatekeepers have conflicts of interest. Issuers select their auditors. An auditor may be concerned that aggressive gatekeeping will result in its losing business.<sup>8</sup> An investment bank that is too aggressive in requiring adverse disclosure about an issuer may lose future underwriting business.

5. *E.g.*, Form S-1, Item 11(e), 2 Fed. Sec. L. Rep. (CCH) ¶ 7121, at 6237 (Oct. 22, 2001) (requiring provision of financial statements meeting the requirements of Regulation S-X, 17 C.F.R. pt. 210).

6. Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 620 (1984). *See generally* Donald C. Langevoort, *Foreword: Revisiting Gilson and Kraakman's Efficiency Story*, 28 J. CORP. L. 499, 499 (2003) (“Gilson and Kraakman’s *Mechanisms of Market Efficiency* is part of the canon of modern corporate law scholarship, one of a handful of articles that has profoundly influenced the way we think about the field.” (footnote omitted)).

7. The scholarship conceptualizing participants who affect the capital markets as gatekeepers is voluminous. *E.g.*, John C. Coffee, Jr., *What Caused Enron? A Capsule Social and Economic History of the 1990s*, 89 CORNELL L. REV. 269, 279 (2004) (using the term “gatekeeper” to refer to “intermediaries who provide verification and certification services to investors”); Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L.J. 857, 888-97 (1984) (discussing “gatekeeper liability and enforcement insufficiency”); Lawrence E. Mitchell, *The Sarbanes-Oxley Act and the Reinvention of Corporate Governance?*, 48 VILL. L. REV. 1189, 1189, 1198-1208 (2003) (explaining how gatekeepers are affected by the Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745); Richard W. Painter, *Convergence and Competition in Rules Governing Lawyers and Auditors*, 29 J. CORP. L. 397, 399, 415-22 (2004) (discussing the provisions of the Sarbanes-Oxley Act); Frank Partnoy, *Strict Liability for Gatekeepers: A Reply to Professor Coffee*, 84 B.U. L. REV. 365, 366, 368-75 (2004) (arguing for a strict liability regime for gatekeepers, but “enabl[ing] experts to specify the range of liability as a percentage of the issuer’s liability, subject to a specified minimum percentage”); David A. Westbrook, *Corporation Law After Enron: The Possibility of a Capitalist Reimagination*, 92 GEO. L.J. 61, 89 (2003) (noting that both “internal and external ‘gatekeeping’ efforts have intensified” in response to the challenge posed by the Enron scandal). Some scholars’ conceptualizations using the gatekeeping framework are reflected in the choices of titles. *E.g.*, Stephen Choi, *Market Lessons for Gatekeepers*, 92 NW. U. L. REV. 916 (1998); John C. Coffee, Jr., *Gatekeeper Failure and Reform: The Challenge of Fashioning Relevant Reforms*, 84 B.U. L. REV. 301 (2004) [hereinafter Coffee, *Gatekeeper Failure*]; John C. Coffee, Jr., *The Attorney as Gatekeeper: An Agenda for the SEC*, 103 COLUM. L. REV. 1293 (2003).

8. Reflecting this concern, in 2000, the SEC increased disclosure requirements and limited auditors’ provision of nonaudit services. Revision of the Commission’s Auditor Independence Requirements, Securities Act Release No. 7919, 65 Fed. Reg. 76,008 (Dec. 5, 2000) (codified in part at 17 C.F.R. § 210.2-01 (2004)). In addition, section 201 of the Sarbanes-Oxley Act of 2002 added paragraph (g) of section 10A of the Securities Exchange Act of 1934, 15 U.S.C. § 78j-1(g) (Supp. II 2002), which limits the provision of nonaudit services by independent auditors.

Much of the legal scholarship investigating gatekeeping presents plausible qualitative analyses.<sup>9</sup> However, in assessing alternative proposals to enhance gatekeeping by changing incentives,<sup>10</sup> it is useful to have additional empirical information on the extent to which gatekeepers are effective. This Article seeks to inform the debate concerning gatekeeping by presenting empirical evidence of the efficacy of a particular kind of gatekeeper, a “qualified independent underwriter” (QIU).

Investment banks acting as underwriters are not required to be independent.<sup>11</sup> They may, and occasionally do, have financial interests in an issuer or a securities offering in addition to receipt of underwriting fees.<sup>12</sup> For example, a company may sell securities to the public for purposes of raising funds to be used to repay an underwriter participating in the offering (or its associates or affiliates). Alternatively, an underwriter (or its associates or affiliates) may have a preexisting equity stake in the issuer.

The federal regulation of securities offerings typically does not regulate the merits of a securities offering.<sup>13</sup> Rather, it merely mandates disclosure of certain material information.<sup>14</sup> The federal regulatory framework governing offerings presenting conflicts of interest is atypical, however; it seeks to assure directly that securities sold in these public offerings are properly priced.

The pertinent rules are promulgated by the NASD. The NASD is a form of self-regulatory organization—a national securities association that regulates and supervises the conduct of its member

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9. See generally Gregory Mitchell, *Case Studies, Counterfactuals, and Causal Explanations*, 152 U. PA. L. REV. 1517, 1521-23 (2004) (expressing concern with use of a single case study to support analyses of policy prescriptions).

10. Compare Coffee, *Gatekeeper Failure*, *supra* note 7, at 345-63 (proposing a modified form of strict liability for auditors with limits on their exposure, as well as imposing certain gatekeeper responsibilities on attorneys, including a “negative assurance” certification obligation), and John C. Coffee, Jr., *Partnoy’s Complaint: A Response*, 84 B.U. L. REV. 377, 378, 382 (2004) (replying to Professor Partnoy’s proposal), with Partnoy, *supra* note 7, at 368-74 (arguing for a modified strict liability regime, but limiting liability through contract as opposed to regulatory caps).

11. See generally NAT’L ASS’N OF SEC. DEALERS, MANUAL (CCH) Rule 2720 (Dec. 2003) (recognizing the existence of conflicts of interest involving underwriting banks and prescribing rules for dealing with them).

12. See *id.* (recognizing that underwriters are not independent).

13. See generally 1 LOUIS LOSS & JOEL SELIGMAN, *SECURITIES REGULATION* 169-77 (3d ed. 1998) (describing the choice of a philosophy of disclosure). State securities laws may regulate the merits of a securities offering. See generally *id.* at 112-25 (discussing the merit-regulation component of state securities laws and the partial preemption of state merit regulation).

14. *Id.* at 151-55.

brokers and dealers.<sup>15</sup> Rules proposed by the NASD regulating its members are subject to SEC approval and abrogation.<sup>16</sup>

NASD rules require that certain offerings involving these conflicts of interest be sold at prices no higher than prices recommended by QIUs.<sup>17</sup> During the recent four-year period studied in this Article, those conflicts included, *inter alia*, (1) more than 10% of the net offering proceeds, excluding underwriting compensation, was to be paid to members participating in the distribution or their associates or affiliates, subject to certain exceptions; (2) a member participating in the distribution (or certain persons related to that member) sold securities in the offering or in the following 90 days, unless those securities were not more than 1% of the securities being offered; and (3) 10% or more of the issuer's common stock or preferred stock or subordinated debt was owned by a member participating in the distribution or its associates or affiliates.<sup>18</sup>

To examine the efficacy of QIUs, this Article reviews IPO-pricing statistics. If pricing statistics for IPOs involving QIUs are different from those of other IPOs, or they vary depending on the circumstance that gives rise to the need for a QIU, that indicates the regulatory scheme fails, because the scheme is designed to make securities prices invariant to the conflicts of interest that give rise to the need for a QIU.

The primary empirical analysis in this Article examines the difference between the price at which stock is sold in an IPO and the closing price on the day of the offering, a difference called the *initial return* or *underpricing*. If QIUs are effective, the initial return should not be related to the fact that there is a QIU.

Using an ordinary least squares regression to examine a sample of 1188 IPOs from 1997 through 2000 (all common stock, "firm commitment" IPOs of nonfinancial firms for which the commercial databases used reported the required data), this Article finds there is a different relationship between the initial return and the presence of a QIU, depending on the reason a QIU is required: a *negative* relationship where at least 10% of the issuer's subordinated debt or preferred stock is owned by a participating NASD member (or its associates or affiliates) (-27%; *p*-value of 0.003); a *negative* relationship where more than 10% of the proceeds is being received by

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15. 6 LOSS & SELIGMAN, *supra* note 13, at 2795-2824 (3d ed. rev. 2002).

16. 15 U.S.C. § 78s(b)-(c) (2000).

17. NAT'L ASS'N OF SEC. DEALERS, *supra* note 11, Rule 2720(c)(3).

18. See *infra* notes 51-58 and accompanying text.

participating NASD members (or their associates or affiliates) (-15%;  $p$ -value of 0.019); and a *positive* relationship for ownership of at least 10% of the issuer's common stock (15%;  $p$ -value of 0.210).<sup>19</sup> These relationships are economically significant as well. There also is a statistically significant difference between each of the first two coefficients and the third coefficient ( $p$ -values of 0.003 and 0.020, respectively).

In addition, this Article finds a statistically significant greater likelihood that an IPO will have a large initial return (at least 20% or 25% one-day return) when participating NASD members, or their associates or affiliates, own at least 10% of the issuer's common stock. There is not a similar increased likelihood arising from the other two types of conflicts of interest. Lastly, a somewhat more complex model finds differences in the performance in the IPO-marketing phase relative to the post-IPO pricing based on the kind of conflict of interest.

In sum, this Article finds statistically significant differences in IPO pricing depending on the type of circumstance that gives rise to a conflict of interest.<sup>20</sup> The results thus indicate that, to the extent these NASD rules are designed to cause securities prices to be invariant to the presence of a conflict of interest, they fail in their purpose.

Customary financial economics theory asserts that there is a negative relationship between underpricing and the quality of the issuer.<sup>21</sup> It postulates that in an IPO in which the issuer is "certified" by a third party, e.g., a reputable underwriter or venture capitalist, less underpricing is required to sell the offering.<sup>22</sup> A financial economist might, therefore, argue that lower initial returns in IPOs involving these conflicts of interest are not improper—that it is not the conflicts of interest that cause lower returns on these IPOs. Rather, the financial economist might argue it is the certification that allows market participants to charge less.

An analogy illustrates the theory. Suppose a gem retailer sells gems both on consignment and from its own inventory. Let us say that, over time, one finds a higher price per gem for those from the seller's own inventory. One might say that the retailer chose to buy the

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19. Similar (or stronger) results are found in estimating the average effect of the treatment (one of the three conflicts of interest), the "ATT," through propensity score matching to control for possible endogeneity.

20. See *infra* Part V.D.

21. See *infra* notes 86-87 and accompanying text.

22. See *infra* notes 86-87 and accompanying text.

gem for resale, and, therefore, it “certified” its quality. That is the analog of the “financial economist” theory discussed above. On the other hand, one might say that the gem retailer is more concerned about getting a better price when it has an equity interest, and that accounts for the price discrepancy.

There are a few problems with applying the above “financial economist” theory to assess underpricing of IPOs involving conflicts of interest. *First*, investment banks, by paying millions of dollars, have recently settled administrative proceedings alleging that they recaptured some of this IPO initial return from investors by receiving above-market compensation on other transactions.<sup>23</sup> So, the underpricing does not all go to the investors, and the IPO price is not the product of a market assessment reflecting solely the value of the IPO stock. *Second*, the results reported in this Article are inconsistent with that theory. If “certification” accounts for underpricing, there should be more “certification,” and therefore *less* underpricing, from a common stock investment than from a preferred stock or subordinated debt investment. However, the results indicate there is *more* underpricing for a common stock investment.<sup>24</sup> In addition, it is difficult to characterize an IPO used to pay off an investment bank as representing “certification” of the issuer as of the time of the IPO. Nevertheless, there is less underpricing in IPOs when the investment banks (or their associates or affiliates) are being repaid with the proceeds than in those where there is a common stock investment.<sup>25</sup> These relationships are the opposite of what one would expect if certification accounted for the impact on underpricing.

These results have a number of implications. This Article provides evidence on the efficacy of a particular kind of gatekeeper. The results are particularly pertinent to proposals, such as one in a recent NASD call for comments, requiring that, in each IPO, the reasonableness of the pricing be passed on by an independent broker-dealer.<sup>26</sup> The results presented in this Article suggest that type of

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23. See *infra* notes 44-48 and accompanying text.

24. See *infra* Tables 2, 4.

25. See *infra* Part V.D (interpreting the results of empirical testing of different conflicts of interest).

26. NAT'L ASS'N OF SEC. DEALERS, NOTICE TO MEMBERS 03-72, at 776 (Nov. 2003), available at [http://www.nasd.com/web/groups/rules\\_regs/documents/notice\\_to\\_members/nasdw\\_003067.pdf](http://www.nasd.com/web/groups/rules_regs/documents/notice_to_members/nasdw_003067.pdf) (last visited Jan. 24, 2005). This proposal is only one of many concerning the IPO process arising from recent scandals. *E.g.*, NYSE/NASD IPO ADVISORY COMM., REPORT AND RECOMMENDATIONS OF A COMMITTEE CONVENED BY THE NEW YORK STOCK EXCHANGE, INC. AND NASD AT THE REQUEST OF THE U.S. SECURITIES AND EXCHANGE



proposal will not be effective, because the independent investment banks employed in IPOs involving conflicts of interest are not effective.<sup>27</sup> These results also may be of use to those who wish to extrapolate an assessment of gatekeepers' efficacy in one context to another.

Lastly, the results raise concerns about the adequacy of the regulation of securities offerings involving conflicts of interest.<sup>28</sup> Prospectus disclosure of the facts underlying these conflicts of interest historically has been cursory.<sup>29</sup> The magnitude of the conflict of interest frequently is not described clearly. Because these conflicts of interest are associated with material changes in pricing and, one supposes, the information can be gathered without significant burden, more detailed disclosure of the identities of the persons with the conflicts and the nature of the conflicts is warranted.

The remainder of this Article proceeds as follows: The IPO process is described in Part II. After a brief introduction to theories explaining IPO-pricing phenomena, Part II describes the mechanics of IPO pricing, which inherently involve collusion among competitors, and the NASD's regulation of IPO pricing in certain offerings raising conflicts of interest. Part III provides context for the empirical investigation by discussing prior theoretical and empirical work. As noted in Part III, to the author's knowledge, no prior work has focused on the range of conflicts of interest examined in this Article. The data are described in Part IV, and the empirical results are presented in Part V. Part VI then sets forth a few proposals for revision of the current regulatory structure, followed by a few concluding remarks.

## II. THE IPO PROCESS

The process by which private companies raise funds in IPOs has been the subject of recent scrutiny for a variety of reasons.<sup>30</sup> The large initial return associated with IPOs may potentially be an underlying cause of various kinds of improper conduct. This Article investigates the relationship between underpricing and a few forms of investment bank conflicts of interest, in particular, receipt by investment banks participating in the distribution (or their associates or affiliates) of

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COMMISSION (May 2003), available at <http://www.nyse.com/pdfs/iporeport.pdf> (last visited Jan. 24, 2005).

27. See *infra* Part V.D.

28. See *infra* Part V.D.

29. See *infra* notes 146-147 and accompanying text.

30. See *infra* notes 37-48 and accompanying text.

more than 10% of the net proceeds and their ownership of 10% or more of the issuer's common stock, preferred stock, or subordinated debt.

### A. Underpricing

Historically, stock sold in an IPO on average has traded immediately following the IPO, e.g., by the close of business on the first trading day, at a significant premium. Scholarly analyses have placed the average initial return in the range of 15%.<sup>31</sup> A wealth of prior literature seeks to explain the reasons for this persistent underpricing. This Article discusses some of that literature in Part III. It is helpful, however, to preview the prominent explanations: the underpricing, in part, compensates prospective investors for undertaking the process of valuing the investment and for revealing positive valuations and the underpricing resolves a “lemons”<sup>32</sup> or “winner’s curse”<sup>33</sup> problem—absent the underpricing, less-informed investors would disproportionately receive allocations of overpriced IPOs. A testable implication, and one that has been examined,<sup>34</sup> is that IPOs underwritten by more reputable investment banks would have less underpricing.

There are trends in the magnitude of the underpricing. At some times, when the IPO market is “hot,” the underpricing may significantly exceed 15%. One such time was the recent Internet bubble. Recent academic work reports the average underpricing in 1999 and 2000 was 50% or more, depending on the sample selected.<sup>35</sup> This short-term return represents substantial aggregate dollar

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31. E.g., Roger G. Ibbotson et al., *Initial Public Offerings*, J. APPLIED CORP. FIN., Summer 1988, at 37, 41 tbl. I (16.37% in 1960 through 1987).

32. See generally George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 492-99 (1970) (illustrating the “lemons” theory with an example involving a credit market having informed and uninformed lenders, where the uninformed lenders will disproportionately lend to those with bad credit).

33. See, e.g., Bernard S. Black, *Bidder Overpayment in Takeovers*, 41 STAN. L. REV. 597, 625 (1989) (“In an auction of an asset of uncertain value, bidders are vulnerable to the ‘winner’s curse’: Even if they estimate value accurately on average, they win the bidding primarily when they overestimate an asset’s true value, and thus tend to overpay on average.”).

34. See *infra* note 86 and accompanying text.

35. Alexander Ljungqvist & William J. Wilhelm, Jr., *IPO Pricing in the Dot-com Bubble*, 58 J. FIN. 723, 729 tbl.II (2003) (reporting the mean initial return (underpricing) as 73.3% in 1999 and 57.7% in 2000).

amounts<sup>36</sup> and therefore provides underwriters substantial incentives to try to capture some of the gain.

*B. Inherent Collusion, Limited Antitrust Application, and Multiple Clients*

In assessing the validity of applying normal economic models to the IPO process, there are two ways that merit mention in which the IPO market is fundamentally different from typical well-functioning markets. One involves collusion and antitrust, and the second involves a “bundling” that may not be obvious. This Part now explains those two types of differences.

*Antitrust.* In a typical IPO, a syndicate (group) of investment banks formally purchases securities from an issuer and immediately resells them to the public.<sup>37</sup> The investment banks’ profits come from the “spread,” the difference between their purchase prices and the prices at which they offer the securities to the market.<sup>38</sup> The syndicate members act as a unit in the following way: each member offers the securities to the public at the same price.<sup>39</sup> The fee realized by each underwriter is the subject of an agreement among all the investment banks.<sup>40</sup> When securities are sold through syndicates, the process inherently involves collusion among competitors (the investment banks).

Recent litigation affirms the application of antitrust law to this process is limited, on the basis that regulation by the SEC grants the conduct implied antitrust immunity.<sup>41</sup> This more limited review of

36. From 1980 to 2001, \$488 billion (in 2001 dollars) was raised in IPOs. Jay R. Ritter & Ivo Welch, *A Review of IPO Activity, Pricing, and Allocations*, 57 J. FIN. 1795, 1795 (2002).

37. 1 LOSS & SELIGMAN, *supra* note 13, at 327-28.

38. *Id.* at 342-46.

39. *Id.* at 340.

40. *Id.* at 333-40.

41. *Friedman v. Salomon/Smith Barney, Inc.*, 313 F.3d 796, 797-98, 800-03 (2d Cir. 2002) (finding that implied antitrust immunity applies to an alleged conspiracy among investment banks to inhibit flipping (quick resales) of securities by retail IPO investors because price stabilization is regulated by the SEC); *In re Initial Pub. Offering Antitrust Litig.*, 287 F. Supp. 2d 497, 499-500, 524-25 (S.D.N.Y. 2003) (holding that implied antitrust immunity applies to allegations that investment banks unlawfully conspired to inflate IPO securities prices through underwriting syndicates by requiring, inter alia, “tie-in purchases” of securities in the aftermarket), *reconsideration denied*, No. 01 Civ 2014 (WHP), 2004 WL 789770, at \*2 (S.D.N.Y. Apr. 13, 2004); *see also* *Gordon v. N.Y. Stock Exch., Inc.*, 422 U.S. 659, 685-86, 691 (1975) (finding an implied repeal of antitrust laws regarding the setting of commission rates by stock exchanges, in light of SEC regulation). *See generally* 6 LOSS & SELIGMAN, *supra* note 13, at 2824-27, 2836-55 (3d ed. rev. 2002) (discussing the application of antitrust law); *id.* at 812 (Supp. 2005) (same).

collusive behavior coupled with significant sums at issue<sup>42</sup> may affect the extent to which other regulation of the IPO process will be effective. There also may be collusion even when the antitrust laws apply. One alleged illustration is a claim investment banks conspired to fix underwriting compensation, in a part of the process not subject to implied antitrust immunity.<sup>43</sup> In sum, because antitrust laws have more limited application in this market, economic models that assume the absence of collusion may not be applicable.

*Bundling and Multiple Clients.* The second anomaly in this market involves NASD regulation of the pricing process and the fact that investment banks have multiple clients. NASD rules partially regulate who can realize the gain from abnormal initial returns in IPOs.<sup>44</sup> The investment banks participating in an IPO are required to make a bona fide offering of the securities at the public offering price.<sup>45</sup> They are not permitted to capture the higher value the market is willing to pay for the securities by simply selling the securities to an affiliate for resale at a higher price.<sup>46</sup>

However, settlements of recent administrative proceedings indicate that investment banks in recent years have evaded these restrictions. One way the banks did this was by having investors who purchased securities in IPOs enter into other securities transactions at above-market prices, rebating substantial portions of the initial return to the investment banks.<sup>47</sup> In addition, there are allegations that

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42. See Ritter & Welch, *supra* note 36, at 1795 (noting that \$488 billion in 2001 dollars was raised in IPOs from 1980 to 2001).

43. *In re Issuer Plaintiff Initial Pub. Offering Antitrust Litig.*, No. 00 Civ. 7804, 2004 U.S. Dist. LEXIS 3892, at \*18 (S.D.N.Y. Mar. 12, 2004) (declining to grant defendants' motion to dismiss, for failure to comply with the statute of limitations, claims alleging an agreement fixing IPO underwriting spreads in violation of antitrust laws). In this same matter, the court had previously held that this alleged conduct was not subject to immunity from antitrust laws. *In re Issuer Plaintiff Initial Pub. Offering Antitrust Litig.*, No. 00 Civ. 7804, 2003 U.S. Dist. LEXIS 10984, at \*9-\*12 (S.D.N.Y. June 27, 2003).

44. See NAT'L ASS'N OF SEC. DEALERS, *supra* note 11, Rule 2790 (Apr. 2004).

45. NAT'L ASS'N OF SEC. DEALERS, NOTICE TO MEMBERS 03-79, at 839-40 (Dec. 23, 2003) (announcing SEC's approval of new Rule 2790), available at [http://www.nasd.com/web/groups/rules\\_regs/documents/notice\\_to\\_members/nasdw\\_003046.pdf](http://www.nasd.com/web/groups/rules_regs/documents/notice_to_members/nasdw_003046.pdf) (last visited Jan. 24, 2005).

46. See *id.* See generally 9 LOSS & SELIGMAN, *supra* note 13, at 4071-88 (3d ed. rev. 2004) (discussing the NASD's regulation of fixed price offerings).

47. See *CSFB Will Pay \$100 Million*, SEC Litig. Rel. No. 17,327 (Jan. 22, 2002) (reporting the settlement, without admission or denial, of charges that Credit Suisse First Boston allocated IPO shares to investors "willing to funnel between 33 and 65[%] of their IPO profits to CSFB . . . in the form of excessive brokerage commissions"), available at <http://www.sec.gov/litigation/litreleases/lr17327.htm> (last visited Jan. 24, 2005); *Bear Stearns, Deutsche Bank, Morgan Stanley Settle NASD IPO Charges*, 36 SEC. REG. & L. REP. (BNA) 947 (2004) (reporting on the settlement by three major investment banks, without

investment banks allocated IPO securities to the personal accounts of individuals in a position to direct future securities business to those banks.<sup>48</sup> Because these rebates were paid, a theoretical economic model that views these IPO transactions in isolation is built on an uncertain assumption.

Even without these rebates, it may be improper to use a theoretical economic model that is focused solely on IPO prices. An investment bank underwriting an IPO may consider both the issuer and the IPO investors to be the bank's clients. The investment bank therefore necessarily has conflicting interests. If the investment bank facilitates profitable transactions for investor-customers, the investment bank may get other future business at market prices (as

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their admission or denial, of NASD charges involving allegations that very high commissions were paid to the banks in exchange for allocations of IPO shares); *see also* EBC I, Inc. v. Goldman Sachs & Co., 777 N.Y.S.2d 440, 442-43 (N.Y. App. Div. 2004) (reversing the dismissal of claims alleging breach of contract and unjust enrichment and affirming the dismissal of a claim alleging breach of fiduciary duty against the lead manager in litigation where the complaint alleged that the underwriter "underpriced plaintiff's shares in order to reap an additional profit, beyond the amount realized on the spread between the price of its own subscription and the higher public offering price, when it 'flipped' its shares in the balloon-priced aftermarket, and that such underpricing was also the consideration given for 'kickbacks' from defendant's favored customers, to whom defendant had allocated shares in the IPO that were also flipped in the aftermarket, disguised as commissions on unrelated transactions"); 9 LOSS & SELIGMAN, *supra* note 13, at 4078-88 (3d ed. rev. 2004) (discussing *Papilsky v. Berndt*, No. 71 Civ. 2534, 1976 U.S. Dist. LEXIS 14442 (S.D.N.Y. June 24, 1976) ("[T]he federal district court held . . . that a mutual fund, its directors, and its investment adviser/underwriter could be held liable for failure to recapture underwriting sellers' discounts for the benefit of the fund.")).

48. *See, e.g.*, SEC v. Credit Suisse First Boston LLC, No. 03 Civ. 2946 (WHP), at 3 (S.D.N.Y. Oct. 31, 2003) (enjoining defendant investment bank from "giving preferential allocations of shares in initial public offerings to directors, officers, or executives of existing or potential investment banking clients"), available at <http://www.sec.gov/litigation/litreleases/judg18110.pdf> (last visited Jan. 24, 2005); *In re* eBay, Inc. S'holders Litig., C.A. No. 19988-NC, 2004 Del. Ch. LEXIS 4, at \*3-\*7 (Feb. 11, 2004) (denying defendants' motion to dismiss in an action alleging that the investment bank allocated IPO shares to directors and officers of its customer in hopes of obtaining future business); Press Release, Nat'l Ass'n of Sec. Dealers, NASD Fines Piper Jaffray \$2.4 Million for IPO Spinning (July 12, 2004) (announcing \$2.4 million settlement of allegations, which Piper Jaffray neither admitted nor denied, that Piper Jaffray allocated shares of hot IPOs to executives of companies from whom they were soliciting investment business, resulting in \$2.4 million of personal profit for these executives), at <http://www.nasd.com> (last visited Jan. 24, 2005). The NASD has proposed new rules to regulate this practice. NAT'L ASS'N OF SEC. DEALERS, NOTICE TO MEMBERS 02-55, at 523-31 (Aug. 2002) (proposing a ban on spinning), available at [http://www.nasd.com/web/groups/rules\\_regs/documents/notice\\_to\\_members/nasdw\\_003492.pdf](http://www.nasd.com/web/groups/rules_regs/documents/notice_to_members/nasdw_003492.pdf) (last visited Jan. 24, 2005); NASD Proposes New Rules to Regulate Initial Public Offerings, 35 SEC. REG. & L. REP. (BNA) 2030 (2003) (indicating the SEC had not ruled on the adoption of the rules as of December 2003). For a general discussion of spinning, see Therese H. Maynard, *Spinning in a Hot IPO-Breach of Fiduciary Duty or Business as Usual?*, 43 WM. & MARY L. REV. 2023, 2029-56 (2002).

distinguished from the naked kickbacks described in the previous paragraph). Therefore, a simple theoretical economic model that looks only at the IPO-pricing phenomena, without taking into account the other incentives, e.g., returns to investment banks in other transactions, can be misleading.

### C. *The NASD's Qualified Independent Underwriter Rules*

Because investment banks have both issuers and investors as clients, they necessarily have conflicts of interest. The conflicts of interest are more acute in some IPOs, however. An investment bank participating in an IPO, or one of its affiliates, may have an equity stake or subordinated debt investment in the firm. These investments may, for example, be through venture capital funds managed by affiliates.<sup>49</sup> Additionally, an underwriter or its affiliate may be receiving a portion of the proceeds of the offering, frequently where an issuer uses IPO proceeds to repay a loan from a commercial bank affiliated with an underwriter.<sup>50</sup>

NASD rules seek to protect the investing public from sales of overpriced IPO securities when participating investment banks have conflicts of interest by requiring the stock be sold at a price no higher than "that recommended by a qualified independent underwriter."<sup>51</sup> In the late 1990s (throughout the time period of the data set studied in this Article), the conflicts of interest that triggered the requirement for a QIU included, *inter alia*, (1) more than 10% of the net offering proceeds, excluding underwriting compensation, was to be paid to members participating in the distribution (or their associated persons or affiliates), subject to certain exceptions;<sup>52</sup> (2) a member participating in the distribution (or certain related persons) sold securities in the offering or in the following ninety days, unless those securities were not more than 1% of the securities being offered;<sup>53</sup> and (3) 10% or more of the issuer's common stock or preferred stock or subordinated debt was owned by a member participating in the distribution (or its associated persons or affiliates).<sup>54</sup> For this purpose, members

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49. *E.g.*, MFRS.' SERVS. LTD., PROSPECTUS, 11,000,000 SHARES OF COMMON STOCK 63-64 (June 22, 2000), *available at* <http://www.sec.gov> (last visited Jan. 24, 2005).

50. *E.g.*, VIASYSTEMS GROUP, INC., PROSPECTUS, 44,000,000 SHARES OF COMMON STOCK 99 (Mar. 23, 2000), *available at* <http://www.sec.gov> (last visited Jan. 24, 2005).

51. NAT'L ASS'N OF SEC. DEALERS, *supra* note 11, Rule 2720(c)(3)(A) (Dec. 2003).

52. NAT'L ASS'N OF SEC. DEALERS, REPRINT OF THE MANUAL Rule 2710(c)(8) (July 2001).

53. *Id.* Rule 2710(c)(7)(C) (repealed Mar. 22, 2004).

54. *Id.* Rule 2720(b)(7); *id.* Rule 2720(c)(1).

participating in the distribution include, in addition to underwriters, other NASD members in the selling group.<sup>55</sup> Lower court authority indicates that when an investment bank elects to act as a QIU, it assumes the potential liability of an underwriter under section 11 of the Securities Act of 1933.<sup>56</sup>

The NASD rules are revised reasonably frequently. For example, the QIU requirement in the second-listed circumstance was recently amended. That requirement was eliminated.<sup>57</sup> Instead, the rules now generally prevent the sale in an IPO, or within 180 days thereafter, of securities acquired by underwriters in the 180 days before the filing of the registration statement.<sup>58</sup>

#### D. *Setting the IPO Price*

A company begins the IPO process by selecting an investment bank to manage the offering (called the "lead manager" or the "managing underwriter").<sup>59</sup> In many cases, before selecting a managing underwriter, the issuer speaks with a number of prospective investment banks, in a process sometimes called a "beauty pageant."<sup>60</sup> During the beauty pageant, banks disclose price estimates (estimates

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55. *Id.* Rule 2720(c)(1) (referencing "underwrit[ing], participat[ing] as a member of the underwriting syndicate or selling group, or otherwise assist[ing] in the distribution").

56. *Harden v. Raffensperger, Hughes & Co.*, 65 F.3d 1392, 1403-04 (7th Cir. 1995) (acting as a QIU imposes underwriter liability under section 11 of the Securities Act of 1933; 15 U.S.C. § 77k (2000); and, for purposes of the limit in section 11(e), a QIU is considered to have underwritten the entire issue). There is additional authority construing the legal consequences of a QIU relationship. *E.g.*, *Glassman v. Computervision Corp.*, 90 F.3d 617, 624-25, 630 (1st Cir. 1996) (affirming dismissal for failure to state a claim as to, *inter alia*, claim prospectus disclosure, concerning the recommendation of a QIU, was false or misleading); *Feiner v. SS & C Techs.*, 11 F. Supp. 2d 204, 210 (D. Conn. 1998) (denying a motion to dismiss claims against a QIU alleging that the QIU's due diligence was inadequate and that the prospectus inaccurately described the factors the QIU considered in recommending a price); *In re Walnut Equip. Leasing Co.*, No. 97-19699DWS, 1999 WL 1271762, at \*6, \*9-\*11 (Bankr. E.D. Pa. Dec. 28, 1999) (finding a QIU's indemnification claim for attorneys' fees in defending itself to be subordinated under 11 U.S.C. § 510(b) (2000)).

57. *See* NAT'L ASS'N OF SEC. DEALERS, NOTICE TO MEMBERS 04-13, at 123, 149 (Feb. 2004) (identifying the pertinent amendment to Rule 2710), *available at* [http://www.nasd.com/web/groups/rules\\_regs/documents/notice\\_to\\_members/nasdw\\_003258.pdf](http://www.nasd.com/web/groups/rules_regs/documents/notice_to_members/nasdw_003258.pdf) (last visited Jan. 24, 2005).

58. NAT'L ASS'N OF SEC. DEALERS, *supra* note 11, Rule 2710(g)(1) (Nov. 2004).

59. Abby M. Alderman & Kenneth Y. Hao, *The Initial Public Offering Process, in* HOW TO PREPARE AN INITIAL PUBLIC OFFERING 1995, at 405, 413 (1995) (PLI Corp. L. & Practice Course Handbook Series No. 904, 1995).

60. *E.g.*, Avital Louria Hahn, *Investment Banks Continue to Hunt for Telecom Research*, INVESTMENT DEALERS DIG., Jan. 10, 2000, at 10 (using the term "beauty pageant").

of the pricing they anticipate they will be able to realize).<sup>61</sup> Those price estimates and other factors are considered by the issuer in choosing an investment bank to manage its IPO.<sup>62</sup>

The actual IPO price is not set at the beauty pageant. It will not be set until the day before the offering commences,<sup>63</sup> normally a few months later.<sup>64</sup> Preparation of preliminary disclosure documents (the preliminary prospectus), due diligence, and marketing using the preliminary prospectus intervene.<sup>65</sup>

Between the selection of an investment bank to manage an IPO and the IPO pricing, the balance of relative negotiating power shifts in favor of the investment banks. The issuer cannot change investment banks at the last minute.<sup>66</sup> As the planned IPO date comes close, the options available to the issuer if the IPO is postponed—what it will do if it does not promptly receive the proceeds it has planned to receive—become increasingly limited. For example, Malone describes IPO pricing in the following way:

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61. See Alderman & Hao, *supra* note 59, at 411-15.

62. *Id.*

63. See CARL W. SCHNEIDER ET AL., GOING PUBLIC: PRACTICE, PROCEDURE AND CONSEQUENCES 7-8 (2002).

64. See *id.* at 7.

65. Alderman & Hao, *supra* note 59, at 416-18 (identifying drafting and marketing phases); John R. Hoynes, *Sample Time and Responsibility Scheduling for an Initial Public Offering*, in HOW TO PREPARE AN INITIAL PUBLIC OFFERING, *supra* note 59, at 43, 47 (identifying due diligence timing).

66. Consider, for example, two parts of the activities of a managing underwriter that occur before pricing: the “road show” and due diligence. As part of marketing an IPO, the investment bank managing the offering typically orchestrates “road show” presentations, marketing events at which presentations are made to prospective investors. CHARLES J. JOHNSON, JR. & JOSEPH McLAUGHLIN, CORPORATE FINANCE AND THE SECURITIES LAWS 150 (2d ed. 1997). Among other matters, the underwriters’ employees may present projections of future issuer performance. *Id.* at 134. Before the IPO, the underwriters also perform due diligence. The precise contours of the due diligence investigation depend on the context. In general terms, however, it involves, *inter alia*, a review of documents; a review of information underlying the issuer’s financial statements; discussions with the issuer’s employees; inspections of the issuer’s facilities; and depending on the circumstances, the issuer’s major lenders, suppliers, and customers. See, e.g., William F. Alderman, *Due Diligence in the Post-Enron Era: Practical Tips from Litigators on Mitigating Underwriter Risk*, in HOW TO PREPARE AN INITIAL PUBLIC OFFERING 2004, at 461, 473-76 (PLI Corp. L. & Practice Course Handbook Series No. 1450, 2004). Due diligence forms a basis for defense to potential liability under sections 11 and 12 of the Securities Act of 1933, 15 U.S.C. §§ 77k, 77l(2000). It also is a basis for rebutting allegations of scienter, an element of a claim under Rule 10b-5, 17 C.F.R. § 240.10b-5 (2004). *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 193 (1976). Substitution of a new managing underwriter requires the new manager be comfortable with the extent of the due diligence and the accuracy of information previously disseminated at the road shows.



The company executives, in turn, often come away from the pricing session embittered. Until this moment the underwriter may have seemed to be their greatest advocate, but now, when it is too late to turn back, the underwriter turns on them; indifferent to the company's needs, the underwriter now takes care of its own image, low-balling the price to guarantee the maximum number of shares sold to look good in the proposal to the next sucker.<sup>67</sup>

Other popular press reports confirm the view that there is a last-minute change in negotiating strength and approach to negotiation.<sup>68</sup>

When the pricing meeting arrives, the managing underwriter will have a sense of what price it believes the stock will trade at immediately following the IPO. Preliminary indications of interest received in the marketing process will provide a basis for that assessment. One can view the pricing decision as one in which the difference between the preliminary estimate revealed in the beauty pageant and the actual value (the market price immediately following the IPO) is split between the issuer and the investors. If the IPO price is higher, the issuer receives more, and, because of less underpricing, the initial IPO investors receive less. The way the underwriters bargain to split this price change between the issuer and the investors may be affected by any conflicts of interest the underwriters have. For example, the investment banks may wish to "leave a good taste in investors' mouths" if the investment banks retain equity and contemplate selling stock at a future time, a theory some of the financial economics literature supports.<sup>69</sup>

It is important to note that reputational factors will not necessarily eliminate last-minute renegotiation. Market forces are less likely to

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67. MICHAEL S. MALONE, *GOING PUBLIC: MIPS COMPUTER AND THE ENTREPRENEURIAL DREAM* 197-98 (1991).

68. A chief financial officer was quoted as describing pricing in the following way: "I feel like I've been to a proctologist—and he had a very cold finger." Robert D. Hof, *Inside an Internet IPO*, BUS. WK., Sept. 6, 1999, at 60, 70; see also Carol Hall & Cynthia Robbins-Roth, *Going Public Without Panic*, RECORDER, May 6, 1992, at 8 ("Pricing is a factor that caught many senior managers by surprise. By the time the pricing meeting occurs, companies typically are not negotiating from a position of strength."); Robert A. Mamis, *The Making of a Millionaire, INC.*, May 1995, at 86, 95 (describing the underwriters as stating a price in a particular IPO with a message, "take it or leave it").

69. See Ivo Welch, *Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings*, 44 J. FIN. 421, 422-23 (1989) ("formalizing" the argument that "issuers may want to 'leave a good taste in investors' mouths' so that future underwritings from the same issuer could be sold at attractive prices"). But see Roni Michaely & Wayne H. Shaw, *The Pricing of Initial Public Offerings: Tests of Adverse-Selection and Signaling Theories*, 7 REV. FIN. STUD. 279, 311 (1994) (criticizing the Welch model's conclusions and finding that "firms that underprice more tend to go to the reissue market less often and for lesser amounts").

restrain this kind of activity because, as noted above,<sup>70</sup> applicable antitrust principles, which otherwise foster competition, are watered-down in their application to investment banks. In addition, prospective issuers cannot easily find accurate information about how individual investment banks have acted in the past. The pricing negotiations are not required to be made public.<sup>71</sup>

### III. EXISTING THEORETICAL MODELS OF THE IPO PROCESS

The customary underpricing of IPOs has been the subject of substantial scholarship. A comprehensive discussion of the theories would be an article in itself (and one that has recently been done<sup>72</sup>). The IPO-pricing process is complex and difficult to model comprehensively in a precise way. This Article does not seek to address the basic question of whether IPO pricing in offerings involving conflicts of interest is “correct,” in the sense of reflecting a return to investors consistent with the returns available otherwise in the market. It also does not purport to provide a comprehensive analysis of all IPO-pricing phenomena. Part of the problem in trying to develop a comprehensive model is that it is clear that there has, at least in recent years, been manipulation of the pricing process. Investment bank settlements, resulting in payment of millions of dollars, evidence this fact.<sup>73</sup>

Nevertheless, before turning to the empirical modeling and results, it is helpful to summarize some of the vast literature on IPOs. There are two pertinent strands of the financial economics literature that converge. One strand is focused on the IPO process.<sup>74</sup> A second pertinent strand<sup>75</sup> examines the Glass-Steagall Act,<sup>76</sup> separating commercial banking from investment banking, and the repeal of

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70. See *supra* notes 37-43 and accompanying text.

71. See NAT'L ASS'N OF SEC. DEALERS, *supra* note 26, at 776 (soliciting comments on the possibility of requiring disclosure of “how the managing underwriter and the issuer arrived at the . . . final IPO price”).

72. Ritter & Welch, *supra* note 36, at 1795. Jenkinson and Ljungqvist have written another source collecting theories. See generally TIM JENKINSON & ALEXANDER LJUNGQVIST, GOING PUBLIC: THE THEORY AND EVIDENCE ON HOW COMPANIES RAISE EQUITY FINANCE (2d ed. 2001).

73. See *supra* notes 45-48 and accompanying text.

74. See *infra* notes 80-100 and accompanying text.

75. See *infra* notes 105-110 and accompanying text.

76. Ch. 89, 48 Stat. 162 (1933).

sections 20<sup>77</sup> and 32<sup>78</sup> of the Glass-Steagall Act by the Gramm-Leach-Bliley Act.<sup>79</sup>

### A. *IPO Underpricing Generally*

As noted above, there has historically been an initial return from buying in an IPO on the order of 15%.<sup>80</sup> Fifteen percent of all IPO proceeds represents a large aggregate dollar amount.<sup>81</sup> Although numerous theories seek to explain the phenomenon, a few prominent theories merit mention.

One theory discussed above is that the underpricing is designed to dispose investors to buy in future offerings.<sup>82</sup> Although Michaely and Shaw believe this underpricing does not help IPO issuers in their subsequent offerings,<sup>83</sup> it might benefit the underwriters in future transactions.

A more elegant theory, involving a “lemons” problem or a “winner’s curse” theory, can be illustrated by assuming (1) there are two types of IPOs, those that are overpriced and those that are not, and (2) there are two types of investors, informed and uninformed.<sup>84</sup> If IPOs are typically oversubscribed, then uninformed investors will disproportionately receive allocations of overpriced IPOs, resulting in a below-average return.<sup>85</sup> In support of this theory are some older empirical investigations finding a negative relationship between underpricing and both the quality of the investment bank managing the IPO<sup>86</sup> and the presence of venture capital investors.<sup>87</sup> However,

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77. 12 U.S.C. § 377 (1994) (repealed 1999) (prohibiting member banks of the Federal Reserve from affiliating with organizations engaged principally in certain listed securities activities).

78. *Id.* § 78 (repealed 1999) (prohibiting, subject to certain exceptions, employees, officers, and directors of Federal Reserve banks from acting in such a capacity with a firm primarily engaged in certain securities activities).

79. Pub. L. No. 106-102, § 101, 113 Stat. 1338, 1341 (1999) (codified as amended in scattered sections of 12 U.S.C. and 15 U.S.C.).

80. See *supra* note 31 and accompanying text.

81. See discussion *supra* note 36.

82. See *supra* note 69 and accompanying text.

83. See Michaely & Shaw, *supra* note 69, at 311.

84. This theory is typically traced to Kevin Rock, *Why New Issues Are Underpriced*, 15 J. FIN. ECON. 187 (1986).

85. See Michaely & Shaw, *supra* note 69, at 315.

86. *E.g.*, Richard B. Carter et al., *Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks*, 53 J. FIN. 285, 285, 292-94 (1998); Richard Carter & Steven Manaster, *Initial Public Offerings and Underwriter Reputation*, 45 J. FIN. 1045, 1061 tbl. III, 1062 (1990); Michaely & Shaw, *supra* note 69, at 295, 296 tbl. 5, 299.

87. William L. Megginson & Kathleen A. Weiss, *Venture Capitalist Certification in Initial Public Offerings*, 46 J. FIN. 879, 879-80 (1991).

investigations of more recent years find a *positive* relationship between underpricing and underwriter quality, which is more difficult to harmonize with this theory.<sup>88</sup>

A recent working paper, by Li and Masulis, examines the relationship between beneficial ownership by underwriters (and their affiliates) and underpricing in the period 1993 through 2000.<sup>89</sup> They find the percentage ownership of underwriters (and their affiliates), especially lead underwriters, although not the mere existence of ownership by underwriters (and their affiliates), to be associated with less underpricing.<sup>90</sup> On the basis of the evidence they present, they assert, “[T]he evidence supports underwriters’ venture investments in IPO issuers serving as a credible certification mechanism and a means to better align underwriter interests with issuers, rather than creating a serious conflict of interest problem for IPO investors.”<sup>91</sup>

One problem with this interpretation is Gompers and Lerner seem to reach a different result in an earlier period.<sup>92</sup> Gompers and Lerner argue the apparent increased underpricing they find is a consequence of perceived conflicts of interest that cause investors to demand lower prices.<sup>93</sup>

A second concern is that Li and Masulis report results based on percentage ownership of the issuer. However, they find, in results they do not report (meaning the actual regression results are not disclosed), that, upon “substitut[ing] underwriter dollar ownership in place of underwriter percentage ownership . . . that our primary conclusions are qualitatively unchanged, *though the significance of the results noticeably weakens.*”<sup>94</sup> Because the results are not reported

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88. Randolph P. Beatty & Ivo Welch, *Issuer Expenses and Legal Liability in Initial Public Offerings*, 39 J.L. & ECON. 545, 588 (1996); Ljungqvist & Wilhelm, *supra* note 35, at 749.

89. Xi Li & Ronald W. Masulis, *Venture Capital Investments by IPO Underwriters: Certification, Alignment of Interest, or Moral Hazard?*, 1, 9 (Dec. 29, 2004), available at <http://www.ssrn.com> (last visited Mar. 1, 2005). Ljungqvist and Wilhelm also find a negative relationship between the amount of stock owned by investment bank affiliates before the IPO and underpricing, and they reference, but do not fully report, results looking at the participation of those investment banks in the offering. Ljungqvist & Wilhelm, *supra* note 35, at 731, 737 tbl. V, 746.

90. Li & Masulis, *supra* note 89, at 12, 18-19 n.20.

91. *Id.* at 29.

92. Paul Gompers & Josh Lerner, *Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital*, 42 J.L. & ECON. 1, 10, 20 (1999) (“While significance levels are low, there does appear to be a monotonic relationship between venture capital/underwriter affiliation and underpricing. A closer relationship is associated with greater underpricing.”).

93. *Id.*

94. Li & Masulis, *supra* note 89, at 19 (emphasis added).

quantitatively, it is difficult to comment on them in detail. However, were *certification* the cause of a change in underpricing, one would think that the dollar amount of an investment would be at least as important a factor as the percentage investment in the issuer. The greater importance of the percentage ownership would be more consistent with the importance of investment bank *control* of the issuer.

Third, there also is a fundamental problem with the data available to researchers that complicates interpretation of the Li and Masulis results. The definition of percentage ownership does not directly reflect the purposes for which Li and Masulis use it. They take percentage ownership from prospectuses.<sup>95</sup> The SEC rule that requires disclosure of percentage ownership in prospectuses incorporates the ownership definition from a rule designed to provide notice of the potential for a change in control.<sup>96</sup> The definition is based on control of voting power or investment power; it is not based on financial interest.<sup>97</sup> Thus, interests owned by venture capital funds will be attributed to the manager of the fund, even if the manager's financial return is not directly affected by the return to the fund. Moreover, one is considered the beneficial owner of securities as to which one merely shares voting or investment power.<sup>98</sup> The percentage ownership may, therefore, represent some factor other than implicit certification by the investment bank. One would need to know more about what causes venture capital firms to take large positions in companies to assess their results.

This fact raises questions about various aspects of the theoretical formulations they discuss. For example, as part of formulating a "certification hypothesis," they assert, "Equity investment in issuers also places underwriter capital at risk."<sup>99</sup> An investment bank affiliate may have no capital at risk in an issuer but nevertheless have a disclosed beneficial stock ownership interest. That is not to say there could not be "certification." There could, for example, be a more attenuated "certification," as the investment bank affiliate's reputation for selecting investments for others could suffer. However, the

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95. Li & Masulis, *supra* note 89, at 9.

96. See 17 C.F.R. § 228.403 (2004); *id.* § 229.403 (mandating disclosure of any beneficial owner of more than 5% of a class of voting securities); *id.* § 240.13d-3 (defining beneficial ownership).

97. See *supra* note 96 and accompanying text.

98. See 17 C.F.R. § 240.13d-3.

99. Li & Masulis, *supra* note 89, at 4-5.

evidence simply does not report on the more direct kind of “certification.”

Fourth, the theory seems too brilliant to be true.<sup>100</sup> It suggests a tautological analysis. If the conflict of interest is associated with less underpricing, i.e., relatively worse pricing for the investor, it is not that the conflict of interest has caused the relatively higher IPO price. Rather, investors have not demanded as high an initial return, because of some sort of certification. It would provide a rationale that would account for worse IPO pricing even if the conflicts of interest are a problem, causing higher pricing (less underpricing).

As to the efficacy of QIUs, Li and Masulis find, also in results they do not quantitatively report, that when they add a variable indicating the presence of a QIU in their regressions, the variable is not statistically significant.<sup>101</sup> They conclude, on the basis of the insignificance of the variable, that “[t]his evidence suggests that the QIU mechanism is ineffective in protecting IPO investors.”<sup>102</sup>

They do not explain the rationale for that conclusion, and it does not appear to follow. Of course, the fact that a relationship is not statistically significant does not mean there is not an actual relationship.<sup>103</sup> More significantly, even if there were not a relationship, that could also be consistent with QIUs functioning perfectly. Let us put aside, for the moment, any results for the percentage ownership by affiliates of participating underwriters. If a variable simply identifying the presence of a QIU required by equity or subordinated debt ownership were not statistically significant, that could arise were QIUs to work perfectly, entirely negating the impact any conflict. Because (1) the percentages used by Li and Masulis do not necessarily correspond to investment bank affiliate financial interest in issuers, and (2) their results are “noticeably weaken[ed],” to

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100. Cf. Daniel A. Farber, *The Case Against Brilliance*, 70 MINN. L. REV. 917, 917 (1986) (“I will argue, however, that ‘brilliance’ should count heavily against an economic or legal theory. The same traits of novelty, surprise, and unconventionality that are considered marks of distinction in other fields should be considered suspect in economics and law, in which thoughtfulness may be a more important virtue. I will further suggest that the current academic bias in favor of brilliant, ‘paradigm shifting’ work should be abandoned in favor of the more pedestrian activity of ‘normal science.’” (footnotes omitted)).

101. Li & Masulis, *supra* note 89, at 19.

102. *Id.*

103. See DAMODAR N. GUJARATI, BASIC ECONOMETRICS 129 (3d ed. 1995) (“If on the basis of a test of significance . . . we decide to ‘accept’ the null hypothesis, all we are saying is that on the basis of the sample evidence we have no reason to reject it; we are *not* saying that the null hypothesis is true beyond any doubt. . . . Better still . . . ‘the conclusion of a statistical test is “do not reject” rather than “accept.”’” (emphasis added) (quoting JAN KMENTA, ELEMENTS OF ECONOMETRICS 114 (1971))).

a level they don't identify, when looking at the dollar amount at issue, the way they have formulated their investigation does not seem to enlighten adequately the question of the efficacy of QIUs. Separately investigating the relationship between pricing and various different circumstances that can require a QIU, as this Article does, illuminates differences that are otherwise masked.

Lastly, there is some ambiguity in their article concerning the kind of circumstance requiring a QIU that they examine. A footnote to their piece indicates a QIU is required for ownership of subordinated debt or equity, but the note does not identify receipt of a percentage of proceeds (or the other, less common, reasons).<sup>104</sup> It is not clear, then, whether they tested the presence of a QIU or the presence of a QIU where required by ownership of equity or subordinated debt.

### B. Universal Banks

Investigations of "universal" banks, or commercial banks affiliated with investment banks, are pertinent to this investigation, because commercial banking relationships can give rise to debt obligations that are repaid in IPOs underwritten by affiliates. The pertinent existing financial economics literature does not present a coherent picture. There is some evidence that debt used to refinance existing debt requires higher yields,<sup>105</sup> suggesting that using the proceeds in this way creates conflicts of interest requiring greater investor compensation.<sup>106</sup> There is also evidence that a bank loan to a low-rated issuer decreases the rates the borrowers have to pay in other loans not used to refinance existing debt.<sup>107</sup>

A few articles examine IPO underpricing and the existence of a lender that can, itself or through affiliates, underwrite stock. Schenone finds a negative, generally statistically significant relationship between underpricing and the issuer having a lender with an affiliate that can

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104. Li & Masulis, *supra* note 89, at 19 n.21.

105. Amar Gande et al., *Bank Underwriting of Debt Securities: Modern Evidence*, 10 REV. FIN. STUD. 1175, 1188-90, 1190 tbl. 5 (1997).

106. *But cf.* Luca Benzoni & Carola Schenone, *Conflict of Interest or Certification? Evidence from IPOs Underwritten by the Firm's Relationship Bank* 21 (Sept. 2004) ("Relationship banks avoid potential conflicts of interest by choosing to underwrite their best clients' IPOs. Rational investors anticipate the bank's reaction and value issues underwritten by the pre-IPO lender higher than IPOs managed by independent banks."), available at <http://ssrn.com>.

107. Gande et al., *supra* note 105, at 1190-91; Manju Puri, *Commercial Banks in Investment Banking: Conflict of Interest or Certification Role?*, 40 J. FIN. ECON. 373, 383 tbl. 3 (1996) (illustrating the negative relationship between yield and the presence of a commercial bank as lead or sole underwriter prior to the Glass-Steagall Act).

underwrite stock,<sup>108</sup> although she finds no significant additional impact on underpricing when that investment bank is used in the offering.<sup>109</sup> However, she does not specifically examine IPOs in which the proceeds are used to repay such a lender. In addition, Klein and Zoeller find that, in Germany, there is a positive relationship between the use of a universal bank and initial return.<sup>110</sup>

### *C. Existing Literature Incomplete in Examining Conflicts of Interest and QIUs*

The existing literature is not focused on separately assessing pricing in offerings involving the different contexts that can require the use of a QIU.<sup>111</sup> This Article, to the best of the author's knowledge, is the first (1) to examine directly the efficacy of QIUs in restraining the impact of conflicts of interest arising from receipt of more than 10% of IPO proceeds, (2) to examine separately conflicts of interest arising from ownership of at least 10% of preferred stock or subordinated debt, and (3) to compare each of these kinds of conflicts simultaneously.

There is an important advantage to examining simultaneously each of these kinds of conflicts, over and above being the first examination of two of these kinds of conflicts of interest. The different kinds of conflicts of interest have different levels of "certification." A

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108. Carola Schenone, *The Effect of Banking Relationships on the Firm's IPO Underpricing*, 59 J. FIN. 2903, 2923-24 tbl. VI, 2944 tbl. XI (2004). Related work has been done by Rajesh Narayanan, Kasturi P. Rangan, and Nanda K. Rangan, who examined pricing of seasoned (non-IPO) equity offerings in 1994 through 1997. They found that "lending bank comanaged issues are priced no different than investment bank-underwritten issues. Lending bank lead managed issues on the other hand are priced lower [i.e., have more underpricing] than investment bank underwritten issues." Rajesh P. Narayanan, Kasturi P. Rangan & Nanda K. Rangan, *The Role of Syndicate Structure in Bank Underwriting*, 72 J. FIN. ECON. 555, 557, 560 (2004).

109. Schenone, *supra* note 108, at 2923, 2943.

110. Peter G. Klein & Kathrin Zoeller, *Universal Banking and Conflicts of Interest: Evidence from German Initial Public Offerings 4* (Contracting & Orgs. Research Inst., Working Paper No. 2003-06, Sept. 24, 2003), *available at* <http://ssrn.com> (last visited Jan. 25, 2005).

111. Works touching on this in some way include Gompers & Lerner, *supra* note 92, at 21 tbl. 7 (finding results similar to the results reported in this Article for the existence of a conflict of interest arising from common stock ownership); Ljungqvist & Wilhelm, *supra* note 35, at 730-31, 746 (reporting beneficial ownership by investment bank affiliates, including those not participating in the distribution, and describing as "not reported" an insignificant coefficient interacting this variable with participation in the IPO, without identifying the sign of the estimate); Chris J. Muscarella & Michael R. Vetsuypens, *A Simple Test of Baron's Model of IPO Underpricing*, 24 J. FIN. ECON. 125, 125 (1989) (examining a sample of banks that participated in their own IPOs); and Li & Masulis, *supra* note 89 (discussed *supra* notes 89-104 and accompanying text).



common stock investment has more risk than a subordinated debt investment and therefore should be associated with more "certification," if certification accounts for any pricing differences. By comparing the relative impact of the different conflicts of interest that have different levels of certification, we can assess whether certification accounts for any pricing differences. To preview the results, the investigation shows pricing differences that are difficult to attribute to certification.

#### IV. DATA

For purposes of this investigation, all common stock IPOs consummated during the four years ended December 31, 2000, were located in the Securities Data Company (SDC) database of securities offerings. This period was chosen because the SEC fully implemented electronic filing of prospectuses by U.S. issuers during 1996.<sup>112</sup> Some of the information used in the regressions was hand collected from the SEC filings. Starting in 1997 avoids having a sample censored in a way that may affect the results.

Offerings of financial companies, identified as firms having four-digit primary Standard Industrial Classification (SIC) codes beginning with "6" (6xxx), were excluded.<sup>113</sup> That filter removes certain unusual offerings, e.g., offerings of financing entities and IPOs concurrent with the demutualization of insurance companies. The pertinent statistics of the offerings used below were taken from the SDC database, with the following exceptions. For each offering, the prospectus was manually reviewed to identify (1) offerings involving simultaneous offerings of warrants and (2) some other anomaly in the offering (e.g., although the offering is classified as an IPO, the prospectus reveals the stock was trading over-the-counter before the offering). Offerings involving either were eliminated from the data set. A review of the prospectuses also was used to locate (1) the shares outstanding after the offering and (2) whether the issuer had two or more classes of stock outstanding after the offering. The first closing price for the security as well as prices for the NASDAQ composite index at pertinent times were taken from the Center for Research in Security Prices (CRSP) database. Those IPOs whose securities could not be located in CRSP were

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112. 17 C.F.R. § 232.901(a)(1) (1996) (superseded) (outlining the transition to electronic filing); Changes and Corrections to EDGAR Phase-in List, Securities Act Release No. 7258, 61 Fed. Reg. 2270, 2270-71 (Jan. 25, 1996).

113. OCCUPATIONAL SAFETY & HEALTH ADMIN., U.S. DEP'T OF LABOR, SIC MANUAL, available at [http://www.osha.gov/pls/imis/sic\\_manual.html](http://www.osha.gov/pls/imis/sic_manual.html) (last visited Jan. 25, 2005).

eliminated. A few corrections to the SDC data, posted on Professor Jay Ritter's Web site,<sup>114</sup> were manually made. Using these filters, a sample of 1188 IPOs was created, consisting of all IPOs in that four-year period that might be classified as "traditional" IPOs for which SDC's database and CRSP report the information used in the models presented below.

The prospectuses filed with the SEC were searched for reference to a qualified independent underwriter or the NASD rules requiring the use of a QIU. That review identified fifty-five IPOs where a QIU was required because more than 10% of the net proceeds was being paid to NASD members participating in the distribution of the IPO (or their associates or affiliates).<sup>115</sup> Sixty IPOs were found where 10% or more of the issuer's common stock was held by participating NASD members (or associates or affiliates), and eighteen IPOs where 10% or more of the issuer's preferred stock or subordinated debt was so held.

Summary statistics for all 1188 IPOs and the three subsets of IPOs involving these conflicts of interest are presented in Table 1. These summary statistics suggest differences in initial return among the groups. The mean underpricing in the whole sample is 47%, compared to the underpricing in the subsamples involving conflicts of interest arising from receipt of proceeds (20%), common stock (52%) and preferred stock or subordinated debt (15%). The 20% and 15% means are statistically significant, at the 1% levels, when compared to the complementary subsamples of IPOs not involving the respective conflicts.<sup>116</sup> IPOs involving those conflicts are larger and less frequently involve venture backing compared to the full sample.

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114. Professor Ritter's Web site is available at <http://bear.cba.ufl.edu/ritter/ipodata.htm> (last visited June 21, 2004).

115. The circumstances giving rise to a conflict of interest are fact-intensive, in a way that may not be adequately captured by a single dummy variable, and they may involve assorted other conflicts of interest. For example, the prospectus for the \$100 million, June 7, 2000, IPO of Ubiquitel, Inc., involves an underwriter having a conflict of interest by virtue of ownership of the issuer's preferred stock and subordinated debt. The prospectus discloses that an affiliate of the lead underwriter previously agreed to purchase \$100 million of additional shares of preferred stock if the IPO did not close before July 31, 2000. *UBIQUITEL INC., PROSPECTUS, 12,500,000 SHARES OF COMMON STOCK* 129 (June 7, 2000), *available at* <http://www.sec.gov> (last visited Jan. 25, 2005). The conflict of interest arising from that relationship seems likely to provide a strong incentive for the investment bank to close the IPO.

116. In two-sample *t* tests with unequal variances, the *t*-statistics testing equality of the means are 5.276 (*p*-value of 0.00); -0.467 (*p*-value of 0.64); and 4.453 (*p*-value of 0.00).

Table 1

Summary statistics of 1188 IPOs of nonfinancial firms from 1997 through 2000 and for the subsets of IPOs involving a QIU because of the receipt of more than 10% of the net proceeds, the beneficial ownership of 10% or more of the issuer's common stock, or the beneficial ownership of 10% or more of the issuer's preferred stock or subordinated debt.

	All IPOs					QIU for Receipt of % of Proceeds				
	(1,188 IPOs)					(55 IPOs)				
	mean	med.	min	max	st. dev.	mean	med.	min	max	st. dev.
initial return (%)	46.78	18.75	-43.27	697.50	77.44	19.70	8.33	-10.62	202.74	35.94
pre-IPO adjust (%)	8.63	5.88	-58.33	344.44	33.17	-0.72	0.00	-50.00	71.43	18.79
offer size (millions)	85	53	5	5,470	218	161	101	7	924	182
est. offer size (millions)	77	50	2	4,267	177	154	100	6	700	154
venture backed	0.55					0.33				
underwriter reputation	7.79	8.10	1.10	9.10	1.89	8.66	9.10	3.10	9.10	1.07
retain (%)	71.52	75.15	0.00	94.65	16.72	65.75	70.37	0.00	90.08	19.19
high tech	0.70					0.38				
bubble period	0.57					0.53				
dual class	0.07					0.20				
assets pre-IPO-millions	143	25	0	21,828	959	364	158	17	1,895	466
days in registration	98.19	77	2	1,016	71.97	103.00	76	34	84	111.79
QIU-% proceeds	0.046					1.000				
QIU-% common	0.051					0.109				
QIU-% sub debt or preferred	0.015					0.091				
affiliate is lead	0.047					0.400				

	QIU for Ownership of Common					QIU for Ownership of Preferred or Sub. Debt				
	(60 IPOs)					(18 IPOs)				
	mean	med.	min	max	st. dev.	mean	med.	min	max	st. dev.
initial return (%)	51.92	25.29	-19.64	507.50	88.15	15.35	2.78	-8.65	105.56	28.83
pre-IPO adjust (%)	9.36	7.18	-39.13	191.67	32.51	-11.75	-2.50	-50.00	20.00	23.00
offer size (millions)	115	79	14	767	138	124	66	7	924	207
est. offer size (millions)	102	60	16	693	121	123	78	6	700	153
venture backed	0.45					0.50				
underwriter reputation	8.43	9.10	4.10	9.10	1.24	8.29	9.10	3.10	9.10	1.62
retain (%)	69.46	74.08	0.00	88.13	17.57	72.51	75.19	51.36	85.00	9.15
high tech	0.62					0.61				
bubble period	0.52					0.50				
dual class	0.07					0.22				
assets pre-IPO-millions	426	68	3	10,798	1,451	180	64	7	1,213	314
days in registration	111.73	76.5	15	1,016	139.94	88.39	72.5	33	261	56.91
QIU-% proceeds	0.100					0.278				
QIU-% common	1.000					0.111				
QIU-% sub debt or preferred	0.033					1.000				
affiliate is lead	0.417					0.444				

Loughran and Ritter provide rankings of investment bank quality,<sup>117</sup> a ranking that is commonly used in the IPO literature.<sup>118</sup> On this scale, the highest rank is 9.1.<sup>119</sup> For each offering, the rank of the underwriter “running the books” (the managing underwriter or the lead manager) was identified, using the Loughran and Ritter rankings. On rare occasions, more than one underwriter may be so identified. In those cases, the average rank was assigned.

The mean underwriter prestige similarly is higher in offerings in the subsamples involving QIUs, ranging from 8.3 to 8.7, compared to 7.8 for the sample as a whole.

The mean of a variable reflecting expected post-IPO retention by pre-IPO shareholders, *retain*, is similar in magnitude between the samples: ranging from 66% to 73%. This variable is designed to reflect the percentage of the issuer the parties, at the time the IPO was filed, expected the pre-IPO shareholders to own following the offering. The shares outstanding after the offering were taken from the prospectuses. The shares expected to be outstanding were computed by subtracting the shares actually offered and adding the shares initially registered. Because the estimated size of an offering can change over time, these two numbers are not necessarily the same. The variable *retain* is a ratio, expressed as a decimal, whose numerator equals the number of shares expected to be outstanding after the offering minus the number of shares expected to be offered, and whose denominator is the number of shares expected to be outstanding after the offering.

## V. EMPIRICAL MODELS AND RESULTS

### A. *Initial Model of Initial Return*

For purposes of providing evidence bearing on the efficacy of QIUs as gatekeepers, this Article examines the relationship between the initial return, the presence of a conflict of interest, and various control variables. The initial return used is the percentage change

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117. Tim Loughran & Jay R. Ritter, *Carter-Manaster Reputation Rankings for IPO Underwriters 1980-2000*, at <http://bear.cba.ufl.edu/ritter/rank.pdf> (last visited Mar. 24, 2004) [hereinafter Loughran & Ritter, *Reputation Rankings*] (providing data used in Tim Loughran & Jay Ritter, *Why Has IPO Underpricing Changed over Time?*, FIN. MGMT., Autumn 2004, at 5 [hereinafter Loughran & Ritter, *Changed over Time*] (updating rankings provided in Carter & Manaster, *supra* note 86, at 1063 app. II)) (on file with author).

118. See Li & Masulis, *supra* note 89, at 10, 34, 38 tbl. 4; *cf.* Carter et al., *supra* note 86, at 285-86 (finding more explanatory power with their measure compared to others).

119. Loughran & Ritter, *Reputation Rankings*, *supra* note 117, at 1.

(expressed as a decimal) from the IPO price to the first closing price reported by CRSP.

To create a model, it is not proper simply to grab all possible data, throw it into a statistical package, and look at the results. Rather, formulation of this kind of model calls for development of principles or theories justifying the inclusion of the various variables included on the right hand side of the equation (the independent variables).

The large existing financial economics literature examining IPOs provides a starting point for this purpose. Use of a size variable is common in the literature.<sup>120</sup> The size used is the estimated offer size at the time the IPO is initially filed, as opposed to the actual offer size. As identified by Hansen, use of the actual size raises econometric concerns, because the size adjusts in proportion to price, a component of the variable on the left hand side of the equals sign—the dependent variable.<sup>121</sup> Use of the estimated size eliminates that concern.

Controlling for the reputation of the investment bank is common.<sup>122</sup> Loughran and Ritter's ranking is included. Because the relationship may be nonlinear, this ranking squared is also included.

Meggison and Weiss find, in a sample of IPOs from 1983 through 1987, the presence of venture capital backing provides certification of an issuer that is associated with a decreased IPO initial return.<sup>123</sup> They argue this certification results in issuers not needing to compensate prospective investors as much for making an investment, thereby producing a negative relationship between venture capital backing and initial return.<sup>124</sup> The presence or absence of venture capital backing used in the models presented below was taken from the SDC database.

The percentage of the offering retained by pre-IPO shareholders may reflect private information concerning the quality of the firm.<sup>125</sup> Retention of a greater share of the firm therefore may be associated with an absence of undisclosed, negative information about the firm at

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120. See, e.g., Carter & Manaster, *supra* note 86, at 1057 (using the offering size as a control variable); Megginson & Weiss, *supra* note 87, at 896 (controlling for size in order to measure the influence of venture capital backing).

121. Robert S. Hansen, *Do Investment Banks Compete in IPOs?: The Advent of the "7% Plus Contract"*, 59 J. FIN. ECON. 313, 339 (2001).

122. E.g., Megginson & Weiss, *supra* note 87, at 897-98 (using market share of lead underwriters in order to gauge quality).

123. *Id.*

124. *Id.* at 879.

125. See Hayne E. Leland & David H. Pyle, *Informational Asymmetries, Financial Structure, and Financial Intermediation*, 32 J. FIN. 371, 372 (1977) ("[T]he entrepreneur's willingness to invest in his own project can serve as a signal of project quality.").

the time of the beauty pageant. For this reason, the variable *retain* is included. A dummy variable *dual class* controls for variation in *retain* arising when the existence of a second class of common stock would cause the variable *retain* to overstate percentage ownership.

The natural logarithm of the issuer's total assets before the offering, expressed in millions of dollars, is also included as an independent variable. There are no a priori expectations concerning how that variable will be directly related to IPO stock performance. Rather, a relationship with the likelihood there will be a QIU is hypothesized. The financing needs of larger firms before an IPO may be greater. Firms with more pre-IPO assets may therefore be more likely to obtain financing from affiliates of investment banks that, for example, are ultimately repaid in an IPO.

To account for technology stocks being "hot" during the period,<sup>126</sup> a dummy variable reflecting the participation of a high technology issuer is included. This variable is taken from the SDC database, and equals one where SDC classifies the issuer in one or more high technology areas.

The percentage change, expressed as a decimal, in the NASDAQ Composite Index from the last close before the date of the IPO to the following close, and that change over the time the offer was in registration, are also used to control for changes in the market as a whole. The models also include a dummy variable reflecting offerings in 1999 and 2000 (the bubble period).

The regression also includes the number of days the offering is in registration, i.e., the time between the first filing with the SEC reported by SDC and the date of the IPO. This variable is not commonly used in the financial economics literature, yet there are good reasons to believe this variable is important. If the SEC asks difficult questions during their review, it may take longer to satisfy the SEC that the disclosure is accurate. This variable, therefore, may be a proxy for problems the issuer's offering presents.

Lastly, dummy variables reflecting each of the three types of conflict are included, as well as a fourth indicating whether an NASD member with a conflict is acting as lead manager in the offering.<sup>127</sup>

A number of approaches are taken to modeling the relationship between IPO underpricing and underwriter conflicts of interest.

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126. See Ljungqvist & Wilhelm, *supra* note 35, at 723 (providing certain comparative statistics for the "dot-com bubble").

127. The prospectuses sometimes do not identify the investment bank with a conflict of interest. In some cases, the information could not be discovered from other SEC filings.

Model 1, in Table 2, presents the results of the first approach—an ordinary least squares estimation of the following model:

initial return (percentage expressed as a decimal) =  $\beta_0 + \beta_1 \ln(\text{est. size}) + \beta_2 \text{ underwriter reputation} + \beta_3 \text{ underwriter reputation}^2 + \beta_4 \text{ NASDAQ 1-Day return (percentage expressed as a decimal)} + \beta_5 \text{ NASDAQ return from the filing of the registration statement to the IPO date (percentage expressed as a decimal)} + \beta_6 \text{ venture backed} + \beta_7 \text{ retain} + \beta_8 \text{ dual class} + \beta_9 \text{ high tech} + \beta_{10} \text{ bubble period (1999–2000)} + \beta_{11} \ln(\text{total assets before IPO, in millions}) + \beta_{12} \text{ days in registration} + \beta_{13} \text{ QIU for percent proceeds} + \beta_{14} \text{ QIU for common stock} + \beta_{15} \text{ QIU for preferred stock or subordinated debt} + \beta_{16} \text{ affiliate is lead} + \varepsilon$

Model 2 in Table 2 is identical, except it omits the underwriter reputation squared variable, because use of two underwriter reputation variables is not common in the literature. Comparison of the results of Models 1 and 2 shows using the underwriter reputation squared variable slightly increases the fit of the model (the R-squared increases by one percentage point) and the results are not qualitatively changed by the use of this variable.

A second approach involves using logit model of the likelihood that there will be a large initial return. Because there is some judgment in deciding what is a “large” initial return, Table 3 presents results of three different logit models. They use the same independent variables used in Model 1. They vary in terms of what is considered a “large” initial return: 20%, 25%, or 30%.

Table 4 presents pairwise comparisons of the coefficients for (1) a conflict of interest arising from common stock, (2) a conflict arising from noncommon-stock ownership, and (3) receipt of a portion of the proceeds. There is a common theme in each of these results: the initial return for IPOs involving a common-stock conflict of interest is greater than that for the other conflicts of interest. IPO pricing varies depending on the type of conflict of interest.

Table 2

Ordinary least squares estimation of the relationship between one-day initial return (percent divided by 100) and the following conflicts of interest requiring the use of a QIU: receipt by participating NASD members (or their associates or affiliates) of more than 10% of the net proceeds, ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's common stock, and ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's preferred stock or subordinated debt. Sample comprises 1188 IPOs of nonfinancial firms from 1997-2000. In brackets below estimated coefficients are *t*-statistics computed using Huber-White robust standard errors. Significance at the 1%, 5%, and 10% levels are shown by \*\*\*, \*\*, and \*, respectively.

	initial return (decimal)	
	(1)	(2)
ln(est. size)	-0.126	-0.129
	[3.431]***	[3.506]***
underwriter reputation	-0.144	0.072
	[3.135]***	[6.372]***
underwriter reputation <sup>2</sup>	0.018	
	[4.505]***	
NASDAQ 1-Day Return (decimal)	2.368	2.428
	[2.007]**	[2.059]**
NASDAQ pre-IPO return (decimal)	0.840	0.820
	[5.352]***	[5.287]***
venture backed	0.121	0.121
	[3.164]***	[3.170]***
retain	0.845	0.875
	[5.860]***	[6.030]***
dual class	0.175	0.205
	[2.230]**	[2.652]***
high tech	0.065	0.070
	[1.491]	[1.605]
bubble period	0.319	0.332
	[8.787]***	[9.098]***
ln (total assets before IPO (millions))	0.003	0.009
	[0.165]	[0.465]
days in registration	-0.002	-0.002
	[7.348]***	[7.248]***
QIU for % proceeds	-0.146	-0.124
	[2.351]**	[2.017]**
QIU for common	0.150	0.163
	[1.255]	[1.367]
QIU for preferred or sub. debt	-0.269	-0.258
	[2.977]***	[2.851]***
affiliate is lead	-0.076	-0.089
	[0.850]	[0.980]
constant	1.857	1.333
	[3.078]***	[2.239]**
R <sup>2</sup>	0.242	0.234



Table 3

Logit estimation of the relationship that the likelihood an IPO will involve at least a 20%, 25%, or 30% one-day initial return and the following conflicts of interest requiring the use of a QIU: receipt by participating NASD members (or their associates or affiliates) of more than 10% of the net proceeds, ownership by participating NASD members (or their associates or affiliates) of more than 10% of the issuer's common stock, and ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's preferred stock or subordinated debt. Sample comprises 1188 IPOs of nonfinancial firms from 1997-2000. Below QIU variable names are numbers of IPOs with returns of at least 20%, 25%, and 30%. Below estimated coefficients, in brackets, are *t*-statistics computed using Huber-White robust standard errors. Significance at the 1%, 5%, and 10% levels are shown by \*\*\*, \*\*, and \*, respectively.

	at least 20%	at least 25%	at least 30%
	(3)	(4)	(5)
ln (est. size)	-0.508	-0.548	-0.508
	[3.051]***	[3.036]***	[2.732]***
underwriter reputation	0.219	0.657	0.397
	[0.932]	[2.343]**	[1.381]
underwriter reputation <sup>2</sup>	0.013	-0.021	-0.002
	[0.713]	[1.010]	[0.086]
NASDAQ 1-Day Return (decimal)	3.931	4.397	1.899
	[1.017]	[1.142]	[0.499]
NASDAQ pre-IPO return (decimal)	2.555	2.519	2.706
	[5.223]***	[5.169]***	[5.503]***
venture backed	0.346	0.288	0.307
	[2.264]**	[1.804]*	[1.860]*
retain	1.081	2.276	2.567
	[1.750]*	[3.148]***	[3.291]***
dual class	0.454	0.786	0.729
	[1.348]	[2.194]**	[2.044]**
high tech	0.536	0.458	0.553
	[2.876]***	[2.266]**	[2.576]**
bubble period	0.962	1.265	1.323
	[5.858]***	[7.381]***	[7.469]***
ln (total assets before IPO (millions))	-0.033	-0.091	-0.096
	[0.440]	[1.163]	[1.153]
days in registration	-0.006	-0.006	-0.006
	[4.696]***	[4.221]***	[4.082]***
QIU for % proceeds	-0.425	-0.777	-0.380
(N = 18/11/11)	[1.101]	[1.857]*	[0.870]
QIU for common	0.827	0.957	0.603
(N = 36/32/30)	[2.216]**	[2.494]**	[1.565]

	at least 20%	at least 25%	at least 30%
QIU for preferred or sub. debt	-0.719	-0.706	-0.754
(N = 6/5/4)	[1.235]	[1.141]	[1.060]
affiliate is lead	0.089	0.010	-0.083
	[0.208]	[0.022]	[0.182]
constant	4.872	3.312	2.779
	[1.787]*	[1.132]	[0.924]
Pseudo R <sup>2</sup>	0.185	0.219	0.226

Table 4

Pairwise comparisons of equality of selected regression coefficients in Models 1, 3, 4, and 5. Significance at the 1%, 5%, and 10% levels are shown by \*\*\*, \*\*, and \*, respectively.

	<i>p</i> -value to reject equality of coefficients
<b>Model 1:</b>	
Dependent Variable—Initial Return	
QIU for % proceeds = QIU for common	0.020**
QIU for common = QIU for preferred or sub. debt	0.003**
QIU for % proceeds = QIU for preferred or sub. debt	0.273
<b>Model 3:</b>	
Dependent Variable—Likelihood at Least 20% Initial Return	
QIU for % proceeds = QIU for common	0.009***
QIU for common = QIU for preferred or sub. debt	0.012**
QIU for % proceeds = QIU for preferred or sub. debt	0.655
<b>Model 4:</b>	
Dependent Variable—Likelihood at Least 25% Initial Return	
QIU for % proceeds = QIU for common	0.001***
QIU for common = QIU for preferred or sub. debt	0.011**
QIU for % proceeds = QIU for preferred or sub. debt	0.916
<b>Model 5:</b>	
Dependent Variable—Likelihood at Least 30% Initial Return	
QIU for % proceeds = QIU for common	0.063*
QIU for common = QIU for preferred or sub. debt	0.056*
QIU for % proceeds = QIU for preferred or sub. debt	0.620

Comparing IPOs with these conflicts of interest to those without conflicts produces a somewhat complex picture. Examining Model 1, there is a negative relationship between initial return and both (1) a conflict from ownership of preferred stock and subordinated debt (-26.9%; *p*-value of 0.003) and (2) a conflict from receipt of a percentage of the proceeds (-14.6%; *p*-value of 0.019). The parameter estimates are also economically significant. On the other hand, there is a positive relationship between a conflict arising from common stock

ownership and the likelihood of an initial return of at least 20% ( $p$ -value of 0.027) and an initial return of at least 25% ( $p$ -value of 0.013).

The results for the other independent variables are generally consistent between the models and consistent with the literature. The high technology dummy variable is positive and, in predicting large initial returns (Models 3 through 5), significant, as is that for IPOs in the Internet "bubble period" (1999 and 2000). Underpricing is an increasing function of underwriter reputation measure. As in Loughran and Ritter, there is a positive relationship between venture capital backing and initial return<sup>128</sup> (although Ljungqvist and Wilhelm find the opposite relationship<sup>129</sup>). The estimated coefficient for the variable *retain* is somewhat unexpected—it is positive. However, the results would be consistent with Loughran and Ritter's assertion that "during the internet bubble issuers placed less weight on IPO proceeds and more weight on the proceeds from future insider sales and follow-on offerings than they did in prior periods."<sup>130</sup>

The coefficient for the days in registration is negative and significant, as expected. In unreported regressions, the results for the conflict of interest variables are qualitatively similar with this variable omitted. The results thus are not a spurious artifact of using this variable.

#### *B. Propensity Score Matching and Estimation of Likelihood of a Conflict*

Although the ordinary least squares model presented in Model 1 is a good step in modeling the relationship between initial return and the presence of a conflict of interest, there is a potential concern that may suggest it is desirable to confirm the results by an alternative technique. The problem is that we would like to be able to examine pairs of IPOs that are identical but for the presence of a conflict of interest. We cannot do that, of course. For each actual IPO, either there is a conflict of interest or there is not. The problem is that various variables considered in the models also may affect whether there is a conflict of interest. This relationship creates what is called "endogeneity," which may affect the validity of the ordinary least squares regressions.<sup>131</sup>

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128. Loughran & Ritter, *Changed over Time*, *supra* note 117, at 45 tbl. 5.

129. Ljungqvist & Wilhelm, *supra* note 35, at 743 tbl.VI.

130. Loughran & Ritter, *Changed over Time*, *supra* note 117, at 26.

131. See JEFFREY M. WOOLDRIDGE, *ECONOMETRIC ANALYSIS OF CROSS SECTION AND PANEL DATA* 50-51 (2001).

One procedure for addressing this concern involves “propensity scores,” meaning the likelihood that a particular offering will involve a conflict of interest.<sup>132</sup> The procedure involves modeling the probability that a particular observation, in this case, an IPO, will involve the participation of an underwriter having a conflict of interest. The term “treatment” is used to identify the characteristic of interest. In this case, that characteristic is the presence of a conflict of interest. Observations involving the treatment are matched, in various ways, with observations of similar propensity scores in which the treatment is not present.<sup>133</sup>

A program written for Stata software implements this matching and estimates the average effect of the treatment on the treated (called ATT) and the standard error of that estimate.<sup>134</sup> The ATT was estimated by kernel matching, which involves matching each observation involving the treatment (each of the conflicts of interest) “with a weighted average of *all* controls . . . inversely proportional to the distance between the propensity scores of treated and controls.”<sup>135</sup> The untreated matched observations are limited to the area of “common support.”<sup>136</sup> To find the area of common support, the observations involving a conflict with the highest and lowest estimated propensity for having a conflict are identified. Observations not involving a conflict with propensity scores outside that range are omitted from the matching.<sup>137</sup>

The propensity scores for the presence of each of the treatments (conflicts of interest) were generated using logit models.<sup>138</sup> The independent variables in the estimations are the same as those used in Model 1 (other than the three dummy variables reflecting the presence of a conflict of interest and whether a lead manager had a conflict). There are three models, each having one of the three types of a conflict of interest as a dependent variable.

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132. For a discussion of propensity scores, see, for example, *id.* at 620-21; Paul R. Rosenbaum & Donald B. Rubin, *The Central Role of the Propensity Score in Observational Studies for Causal Effects*, 70 *BIOMETRIKA* 41, 41-55 (1983).

133. See Rosenbaum & Rubin, *supra* note 132, at 48.

134. Sascha O. Becker & Andrea Ichino, *Estimation of Average Treatment Effects Based on Propensity Scores*, 2 *STATA J.* 358, 361-76 (2002) (discussing the program).

135. *Id.* at 361.

136. See *id.* at 362 (discussing the advantages and disadvantages of the common support “option,” which the program allows for).

137. See *id.* at 360, 362, 371 (discussing both how the area of common support is determined and how using it may improve the quality of matches).

138. See *infra* Table 3.

This methodology involves stratifying the observations based on propensity score and confirming that, within each stratum, the means of the independent variables are balanced.<sup>139</sup> The Stata program confirms whether the balancing property is satisfied, using a significance level of 0.01.<sup>140</sup> The balancing property is satisfied for the sample of 1188 IPOs and the models used.<sup>141</sup>

These results, reported in Table 5, confirm the conclusions drawn from the ordinary least squares regressions. The estimated ATT for a conflict of interest arising from receipt of proceeds is -0.245 (24.5%), and the estimated ATT for a conflict of interest arising from ownership of subordinated debt or preferred stock is -0.329 (32.9%). Both are statistically significant at the 1% level. The ATT for a conflict of interest arising from ownership of common stock is positive and not statistically significant.

Table 5

Estimation of ATT on one-day initial return through propensity score matching, using kernel matching. Treatments consist of (1) QIU for receipt by participating NASD members (or their associates or affiliates) of more than 10% of the net proceeds, (2) QIU for ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's common stock, and (3) QIU for ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's preferred stock or subordinated debt. Independent variables include, for each estimation:  $\ln(\text{est. size})$ , underwriter reputation, underwriter reputation<sup>2</sup>, NASDAQ 1-Day Return (decimal), NASDAQ pre-IPO return (decimal), venture backed, retain, dual class, high tech, bubble period,  $\ln(\text{total assets before IPO (millions)})$ , and days in registration. Following ATTs are *t*-statistics, computed using bootstrapped standard errors (200 repetitions). Estimations limited to areas of common support. Propensity scores estimated with logit models. Significance at the 1% level shown by \*\*\*.

	No. of Obs.	No. of Controls	ATT	<i>t</i> -statistic
QIU for % proceeds	55	755	-0.245	-3.739***
QIU for % common	60	1075	0.087	0.812
QIU for preferred or sub. debt	18	1129	-0.329	-3.942***

139. See Becker & Ichino, *supra* note 134, at 359-60 (describing the process and theory).

140. *Id.* at 366.

141. The balancing property is also satisfied in the corresponding subsamples restricted to the areas of common support, except in the estimation of the ATT for a QIU required for receipt of a percentage of proceeds. In that case, one variable,  $\ln(\text{total assets before IPO (millions)})$ , is unbalanced. Where the propensity score for a QIU required for receipt of a percentage of proceeds is estimated with a probit model, the balancing property is satisfied in the subsample restricted to the area of common support. That model produces similar results (observations: 55; controls: 616; ATT: -0.228; *t*-statistic: -3.599). Estimating that ATT, not restricted to the area of common support and using a logit model to estimate propensity scores, also produces similar results.

*C. Pre-IPO and Post-IPO Quartiles and Centiles*

The last way of examining any difference in IPO pricing that arises from the existence of a conflict of interest is novel. The principle to be investigated is the following: at the time an IPO is priced, the underwriters will have an idea of the demand for the IPO at various prices and, therefore, some sense of what the price of the IPO stock can be expected to be at the end of trading on the day of the IPO. IPO pricing in part involves splitting the difference from the price that was initially estimated at the beauty pageant to that estimated closing price between the issuer and the investors.

The statistics in Table 1 show that the pre-IPO price adjustment, with a mean of 8.6 percentage points in the full sample and a standard deviation of 33, is more modest than the initial return, with a mean of 47 percentage points and a standard deviation of 77. We can compare where a particular IPO is, in the sample, in terms of its pre-IPO price adjustment, relative to where the IPO is, in the sample, in terms of its initial return. For example, an IPO might be in the first (lowest) quartile in terms of pre-IPO price adjustment and in the third quartile in terms of initial return. We can compare the differences in these quartiles for each IPO. If the IPO-pricing process is invariant to the conflicts of interest, we would expect to find no significant relationship between the presence of a conflict and the quartile change.

The results of two models of this kind of relationship are presented in Table 6. They use the same independent variables used in Model 1 (except the bubble period variable is omitted). To show that the results are robust, models comparing quartiles and centiles (divided into hundreds) are reported, showing the underpricing quartile or centile minus the quartile or centile of the pre-IPO price adjustment. To control for differences among years, the quartiles and centiles are computed for each calendar year, based on the year of issuance, and the bubble period variable is omitted.

Table 6

Ordinary least squares estimation of relationship of: quartile or centile of the one-day initial return for the IPO among IPOs sold in the calendar year *minus* quartile or centile of the pre-IPO price adjustment for the IPO among IPOs sold in the calendar year. Independent variables include, inter alia, receipt by participating NASD members (or their associates or affiliates) of more than 10% of the net proceeds, ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's common stock, and ownership by participating NASD members (or their associates or affiliates) of 10% or more of the issuer's preferred stock or subordinated debt. Sample comprises 1188 IPOs of nonfinancial firms from 1997-2000. In brackets below estimated coefficients are *t*-statistics computed using Huber-White robust standard errors. Significance at the 1%, 5%, and 10% levels are shown by \*\*\*, \*\*, and \*, respectively.

	Initial Return Stratum <i>minus</i> pre-IPO Adjustment Stratum	
	Quartiles	Centiles
ln(est. size)	-0.140	-4.307
	[2.410]**	[2.871]***
underwriter reputation	0.248	5.140
	[2.701]***	[2.144]**
underwriter reputation <sup>2</sup>	-0.017	-0.353
	[2.283]**	[1.871]*
NASDAQ 1-Day Return (decimal)	1.191	47.690
	[0.803]	[1.324]
NASDAQ pre-IPO return (decimal)	-0.827	-21.591
	[4.361]***	[4.621]***
venture backed	0.002	0.640
	[0.031]	[0.383]
retain	0.392	8.768
	[1.785]*	[1.573]
dual class	0.104	2.501
	[0.758]	[0.720]
high tech	0.032	1.767
	[0.430]	[0.932]
ln (total assets before IPO (millions))	-0.024	-0.181
	[0.802]	[0.232]
days in registration	0.001	0.014
	[1.285]	[0.844]
QIU for % proceeds	0.042	1.596
	[0.309]	[0.467]
QIU for common	0.279	6.181
	[2.193]**	[2.084]**
QIU for preferred or sub. debt	0.180	5.051
	[0.755]	[0.736]
affiliate is lead	-0.099	-2.948
	[0.588]	[0.669]
constant	1.346	52.533
	[1.439]	[2.201]**
R <sup>2</sup>	0.042	0.044

The results show a positive relationship between these quartile and centile differences and the presence of a common stock conflict of

interest, but no statistically significant relationship for the other types of conflicts of interest. This result is subject to a number of interpretations. It is consistent with investment banks more aggressively influencing the initial aftermarket pricing when their affiliates own the issuer's common stock. It is not at all clear, however, than any post-IPO influence could be extended until subsequent sales were made. One might formulate alternative rationales as well. Although it is difficult to select among competing interpretations of the differences, the fundamental inquiry involves whether pricing mechanisms in offerings involving QIUs function differently. These results provide further support for the conclusion that there is such a difference.

#### *D. Interpretation of Results*

In sum, the results show these conflicts of interest produce different kinds of IPO pricing. There is less underpricing in IPOs involving conflicts of interest for preferred stock or subordinated debt and for conflicts arising from receipt of a portion of the proceeds. It is not surprising that the presence of a QIU will not cause the IPO-pricing process to be invariant to the presence of these conflicts of interest. The investment banks typically charge only a modest sum, or nothing, to act as a QIU. For example, Credit Suisse First Boston charged \$10,000 to act as QIU in the \$137 million October 2000 IPO of Westport Resources Corporation, a modest amount relative to the \$9.3 million aggregate underwriting fee for the IPO.<sup>142</sup> Expecting a QIU to mitigate conflicts of interest for such a small fee may be too optimistic.

This Article does not purport to provide a comprehensive economic rationale why IPO pricing has the pattern the results reveal. One hypothesis might be that somehow the investment banks' retained equity in IPO firms is ultimately enhanced by greater underpricing, e.g., by attracting greater interest in subsequent offerings.<sup>143</sup> Yet malfeasance in IPO marketing makes it difficult to model the process fully. In any case, that puzzle is principally a question of financial economics, not a legal one. The question this Article seeks to answer is whether the regulatory environment succeeds in making IPO pricing

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142. See WESTPORT RES. CORP., PROSPECTUS, 9,150,000 SHARES OF COMMON STOCK, 1, 73 (Oct. 19, 2000), *available at* <http://www.sec.gov> (last visited Jan. 26, 2005).

143. See *supra* note 130 and accompanying text.



invariant to the conflicts of interest. The results make clear the answer is "No."

It is important to note, in considering the results, that the IPO market was hot within the time period studied. IPO underpricing in the late 1990s was extreme. How firms are affected by conflicts of interest depends on the magnitude of the amount at issue. If only immaterial amounts are at issue, a conflict of interest may have no impact on performance. Because, as noted above, pricing relationships in IPOs have changed over time—more reputable investment banks being associated with relatively more underpricing in recent times, with the opposite relationship earlier—it is not clear that the relationship found in this Article could be expected to apply to, or be identifiable in, other periods involving qualitatively different IPO markets.<sup>144</sup> However, in assessing the consequences of conflicts of interest, one must contemplate the atypical markets as well as the typical ones. An analogy illustrates the point: if one wishes to assess the performance of security guards, one needs to examine how they act when there is trouble, even if trouble does not ordinarily occur.

Lastly, there are multiple factors that influence the incentives of investment banks. They have client relationships with both issuers and investors, who each have divergent interests in IPO pricing. An investment bank's conflicts are therefore multifaceted. The importance and impact of investment bank conflicts of interest may change with the ebb and flow of the relative importance of investment bank relationships with various constituencies.

## VI. POSSIBLE REFORM

The results in this Article can be useful for setting expectations about the efficacy of imposing explicit gatekeeping obligations on investment banks. For example, the NASD recently solicited comments on a proposal to require that, in each IPO, the reasonableness of the pricing be passed on by an independent broker-dealer.<sup>145</sup> Because the results in this Article indicate QIUs are not effective in eliminating pricing differences, there is reason to be skeptical about the efficacy of that possible revision.

The principal purpose of this Article is to provide evidence of the impact of the efficacy of the NASD's current rules designed to restrain

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144 See generally *supra* notes 84-88 and accompanying text (discussing reversals of other relationships over time).

145. NAT'L ASS'N OF SEC. DEALERS, *supra* note 26, at 776.

the impact of various kinds of conflicts of interest. It provides evidence useful in assessing the efficacy of express gatekeeping obligations. Although preparation of a comprehensive set of regulatory reforms designed to address the problems in the regulatory environment highlighted by recent corporate scandals would be much too voluminous to try to detail here, there are some focused improvements that this investigation clearly highlights.

The first proposal concerns the information about the “receipt of proceeds” conflict of interest that needs to be disclosed. The results in this Article indicate these relationships are associated with pricing differences. However, the currently required disclosure of the relationships is not sufficient to analyze them. NASD Rule 2710(h)(1) requires the disclosure of (1) the fact that the offering is subject to the rule, (2) the name of QIU, and (3) that the QIU is assuming responsibilities in pricing and due diligence.<sup>146</sup> This information is not adequate to assess the extent of the conflict of interest. If the conflicts of interest are important, which the above empirical analysis indicates they are, an investor would want to know the magnitude of the conflict of interest. Information useful in assessing conflicts includes (1) the actual amount of proceeds being directed to participating NASD members and (2) the identities of the NASD members.

The former is useful, because, for example, one would expect the consequences of an 85% allocation of the proceeds to underwriters to be different from that of a 15% allocation of the proceeds. The fact that an institutional investor may be able to ask about the matter in a road show presentation is not a satisfactory substitute. A more detailed assessment of the efficacy of QIUs requires looking at broad trends, and that assessment is impeded when the information is not made publicly available.

The latter is also useful, because it may be that the conflict of interest has a different impact depending on the role the investment bank has in the particular offering. Making that assessment is difficult when the identities of the parties with conflicts are not prominently disclosed.

A second proposal concerns the prominence of the information. The empirical analysis indicates a relationship of a substantial estimated magnitude. The presence of a conflict of interest merits more prominent disclosure than a customary description buried in the

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146. NAT'L ASS'N OF SEC. DEALERS, *supra* note 11, Rule 2710(h)(1) (Nov. 2004).

"Plan of Distribution" section of a prospectus.<sup>147</sup> Requiring disclosure either on the front or back cover or in some other prominent location would be appropriate.

A third proposal involves the complementary issue of conflicts of interest arising from equity or subordinated debt ownership. As noted above, the criterion for ownership currently employed is based on control, as opposed to financial interest.<sup>148</sup> Ownership can be, for example, either through an affiliate-managed venture capital fund or through another entity that is a wholly owned subsidiary of a common corporate parent. The impact of a conflict of interest arising from equity or subordinated debt ownership may vary between these two types of ownership structures. Without more detailed disclosure of the relationships, it is difficult to know.

## VII. CONCLUSION

The NASD's rules provide that when certain kinds of investment bank conflicts of interest are present, an issuer is required to sell the securities at a price no higher than that recommended by a QIU.<sup>149</sup> These offerings involve explicit certification, as compared to the implicit certification normally arising from an investment bank's participation in a securities offering. A review of IPOs of nonfinancial firms from 1997 through 2000 indicates there are significant differences between price statistics of IPOs presenting conflicts of interest requiring QIUs, depending on the kind of conflict of interest involved.

The results cannot be attributed to certification—the traditional financial economics story. There is relatively *more* underpricing in IPOs in which a conflict arises from ownership of common stock than in IPOs in which participating NASD members receive a portion of the proceeds or beneficially own preferred stock or subordinated debt. If certification accounted for pricing differences, there should be relatively *less* underpricing. Insofar as these NASD rules are considered as seeking to employ investment banks as "gatekeepers" to

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147. Cf. 17 C.F.R. § 230.421(a) (2004) ("The information required in a prospectus . . . shall not . . . be set forth in such fashion as to obscure any of the required information or any information necessary to keep the required information from being incomplete or misleading"); Royce de R. Barondes, *Adequacy of Disclosure of Restrictions on Flipping IPO Securities*, 74 TUL. L. REV. 883, 909 (2000) (discussing "buried" disclosure).

148. See *supra* note 96 and accompanying text.

149. NAT'L ASS'N OF SEC. DEALERS, *supra* note 11, Rule 2720(c)(3)(A).

make IPO pricing invariant to the existence of these conflicts of interest, they do not succeed.

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